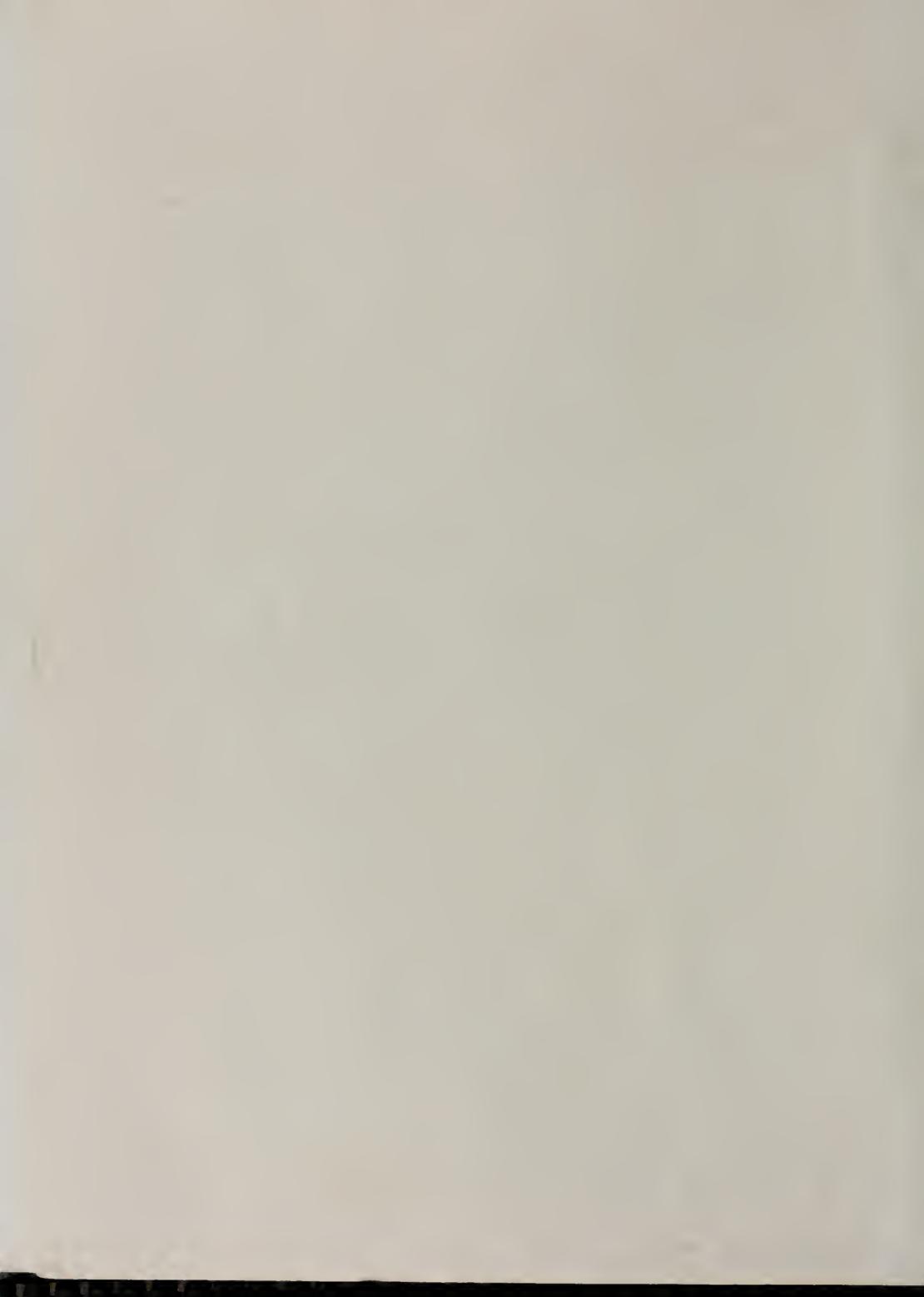
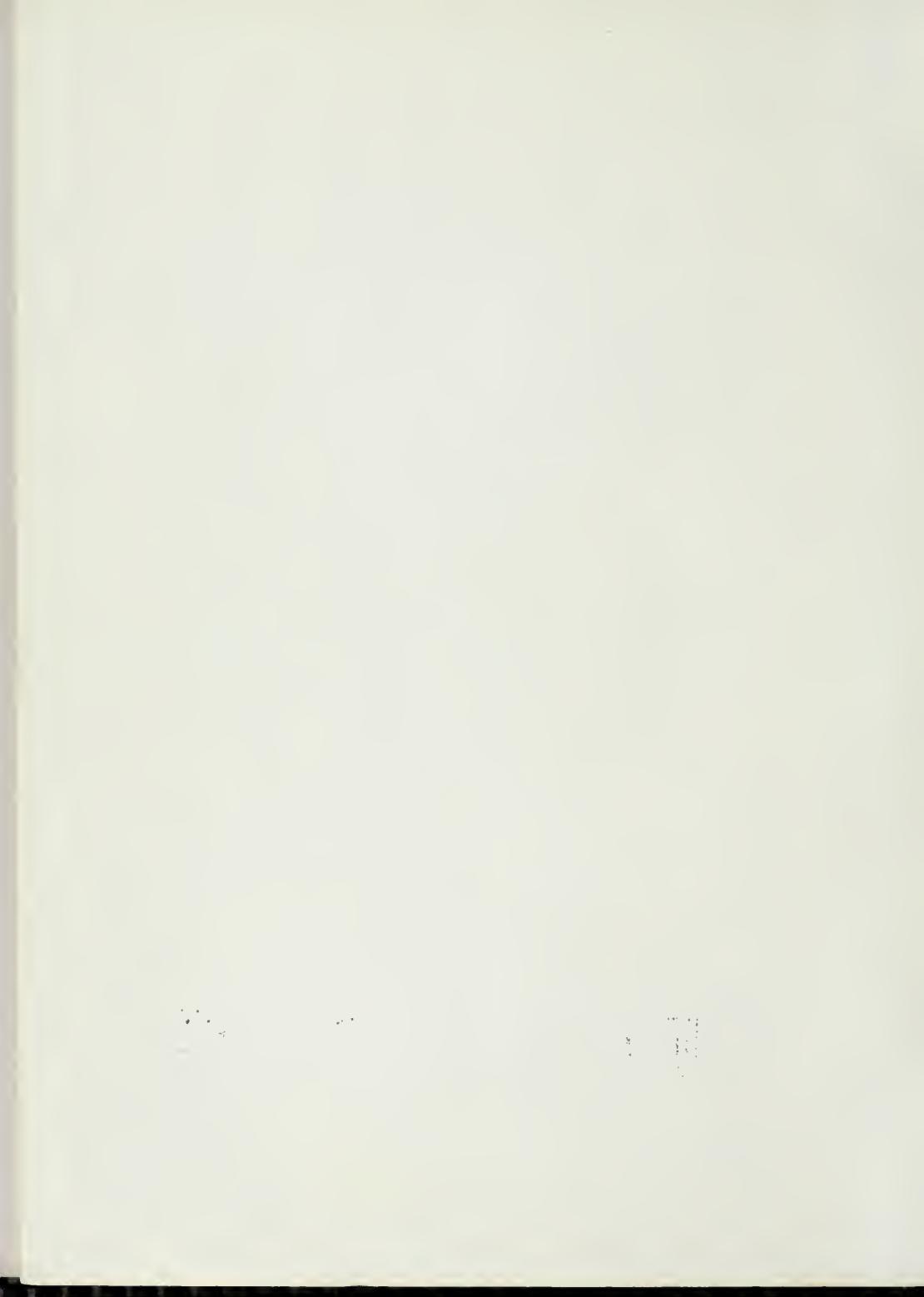


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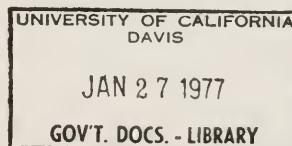
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HYDROLOGIC DATA: 1975

Volume I: NORTH COASTAL AREA

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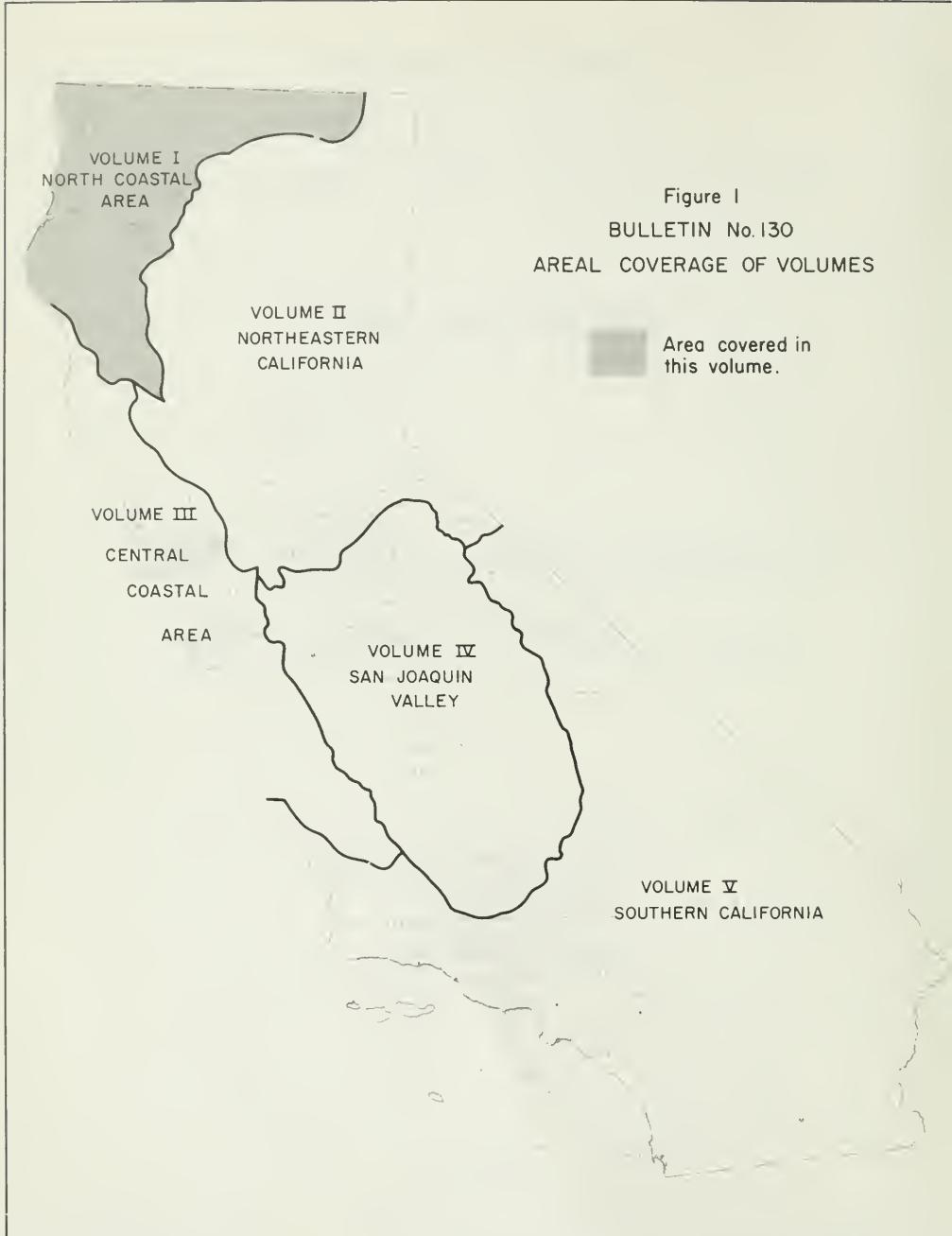


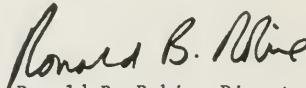
Figure I
BULLETIN No. 130
AREAL COVERAGE OF VOLUMES

FOREWORD

The data collection programs of the Department of Water Resources have been designed to supplement the activities of other agencies to satisfy specific needs of the State. Bulletin No. 130-75 presents useful, comprehensive, accurate, and timely hydrologic data which are prerequisites for monitoring environmental conditions as well as effective planning, design, construction, and operation of water facilities.

The Bulletin No. 130 series has been published annually in five volumes since 1963. Each volume presents hydrologic data for one of five reporting areas of the State. These areas are delineated on the map to the left.

This Bulletin No. 130-75 is the last of this series to be published. It is to be replaced with a statewide Bulletin No. 130, "Hydrologic Data Index", which will show what data are available and where they may be obtained.



Ronald B. Robie, Director
Department of Water Resources
State of California

CONVERSION FACTORS

English to Metric System of Measurement

<u>Quantity</u>	<u>English unit</u>	<u>Multiply by*</u>	<u>To get metric equivalent</u>
Length	inches (in)	25.4	millimetres (mm)
		.0254	metres (m)
	feet (ft)	.3048	metres (m)
Area	miles (mi)	1.6093	kilometres (km)
	square inches (in^2)	6.4516×10^{-4}	square metres (m^2)
	square feet (ft^2)	.092903	square metres (m^2)
	acres	4046.9	square metres (m^2)
		.40469	hectares (ha)
		.40469	square hectometres (hm^2)
		.0040469	square kilometres (km^2)
Volume	square miles (mi^2)	2.590	square kilometres (km^2)
	gallons (gal)	3.7854	litres (l)
		.0037854	cubic metres (m^3)
	million gallons (10^6 gal)	3785.4	cubic metres (m^3)
	cubic feet (ft^3)	.028317	cubic metres (m^3)
	cubic yards (yd^3)	.76455	cubic metres (m^3)
	acre-feet (ac-ft)	1233.5	cubic metres (m^3)
		.0012335	cubic hectometres (hm^3)
		1.233×10^{-6}	cubic kilometres (km^3)
Volume Time (Flow)	cubic feet per sec (ft^3 s)	28.317	litres per second (l s)
		.028317	cubic metres per sec (m^3 s)
	gallons per minute (gal/min)	.06309	litres per second (l s)
		6.309×10^{-5}	cubic metres per sec (m^3 s)
	million gallons per day (mgd)	.043813	cubic metres per sec (m^3 s)
Water Usage	acre-feet per acre	.3048	cubic metres per square metre (m^3 m^{-2})
Mass	pounds (lb)	.45359	kilograms (kg)
	tons (short, 2,000 lb)	.90718	tonne (t)
		907.18	kilograms (kg)
Power	horsepower (hp)	0.7460	kilowatts (kW)
Pressure	pounds per square inch (psi)	6894.8	pascal (Pa)

* For greater accuracy, use conversion factors in "Metric Practice Guide"
(American Society for Testing and Materials, E 380-72).

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APPENDIX F: WASTE WATER DATA, which appeared in certain volumes of the Bulletin No. 130 series, has been discontinued. For information regarding waste water, the reader is referred to the recently reactivated Bulletin No. 68 series: "Inventory of Waste Water Production and Waste Water Reclamation Practices in California".	

ABSTRACT

The report contains tables showing data on precipitation, surface water flow, ground water levels, and surface and ground water quality in the north coastal area during the 1974-75 water year. Figures show the location of climatological stations, surface water measurement stations, surface water sampling stations, and ground water basins.

ACKNOWLEDGMENTS

Valuable assistance and contributions were received from several agencies and many private cooperators. The cooperation of the National Weather Service (formerly the U. S. Weather Bureau) and the U. S. Geological Survey was particularly helpful and is gratefully appreciated.

A special note of thanks is extended to the many loyal and dedicated weather observers whose unselfish efforts have contributed immeasurably to our knowledge of historical weather conditions in the north coastal area.

State of California
EDMUND G. BROWN JR., Governor

The Resources Agency
CLAIRE T. DEDRICK, Secretary for Resources

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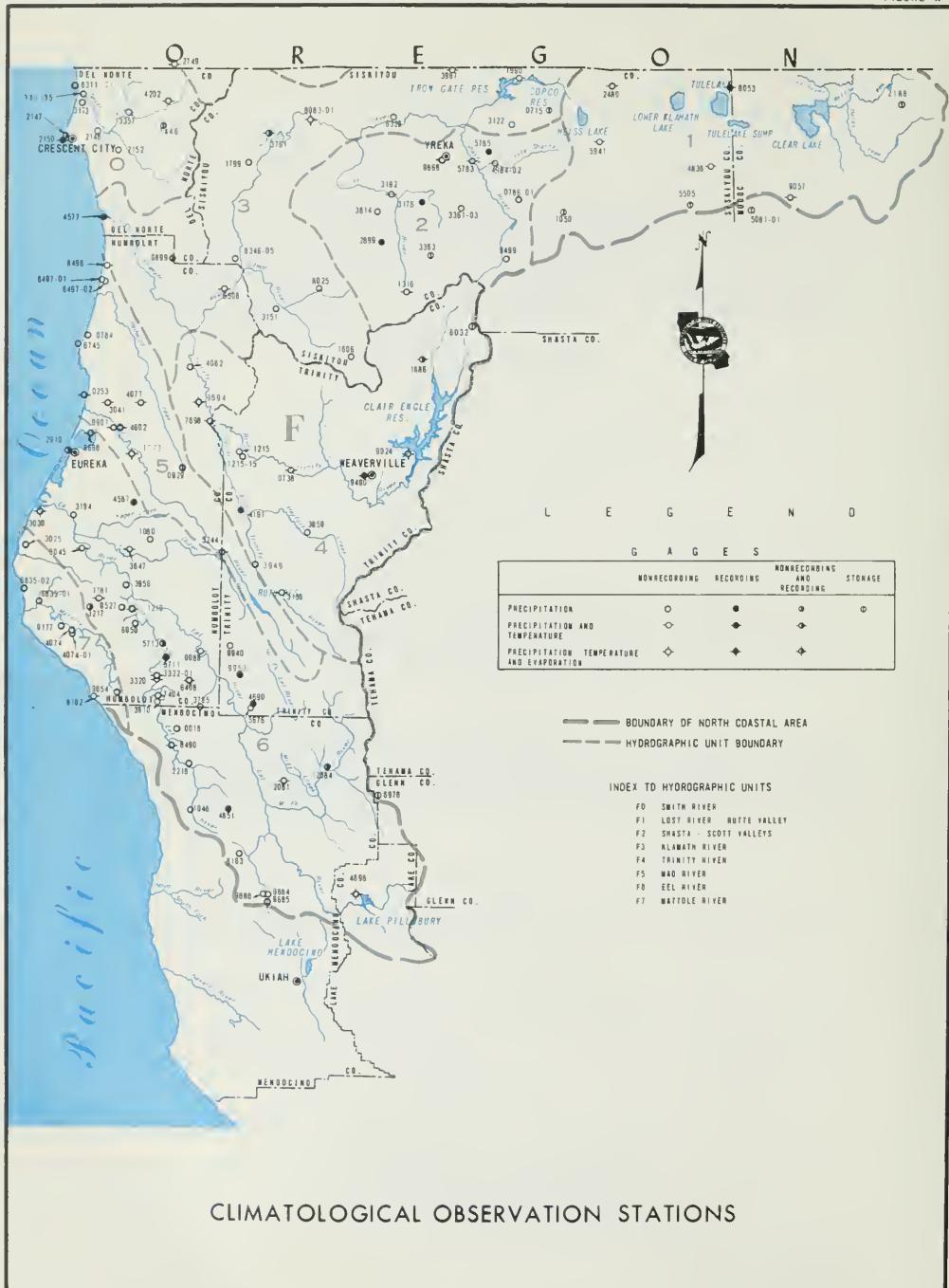
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Division of Planning
Environmental Quality Branch
Water Resources Evaluation Section



APPENDIX A
CLIMATOLOGICAL DATA
TABLE A-1
PRECIPITATION IN NORTH COASTAL AREA
DURING WATER YEAR 1975

Table A-1 summarizes monthly precipitation totals for selected stations for the 1975 water year, October 1, 1974, through September 30, 1975. The table shows stations by assigned number, name, and county. Location is defined by latitude and longitude in degrees to the third decimal, and stations are located on the map on the preceding page.

Precipitation values are shown to the nearest hundredth (.01) of an inch. Where digital recording rain gages are used, a zero is shown in the second decimal place, even though these instruments record to only the nearest tenth (.1) of an inch. The following notations are used to qualify the values:

- No record or incomplete record
- B Record began
- E Wholly or partially estimated
- N Record ends
- T Trace, an amount too small to measure

Precipitation data collected by the National Weather Service and local observers and cooperators in the north coastal area are available in greater detail in other reports. The National Weather Service publishes a report entitled "Climatological Data for California" and a companion volume, "Hourly Precipitation Data". Department of Water Resources Bulletin No. 165, "Climatological Stations in California, 1971, Indexed by County", contains station information on both active and historical precipitation measurement stations.

In addition, evaporation data and daily climatologic data, including temperatures, together with local conditions and qualifying remarks, are available in the files of the Department of Water Resources.

The county codes (CO) used in Table A-1 are shown below:

<u>County</u>	<u>Code</u>
Del Norte	08
Glenn	11
Humboldt	12
Lake	17
Mendocino	23
Modoc	25
Siskiyou	47
Trinity	53

TABLE A-2
STORAGE GAGE PRECIPITATION DATA

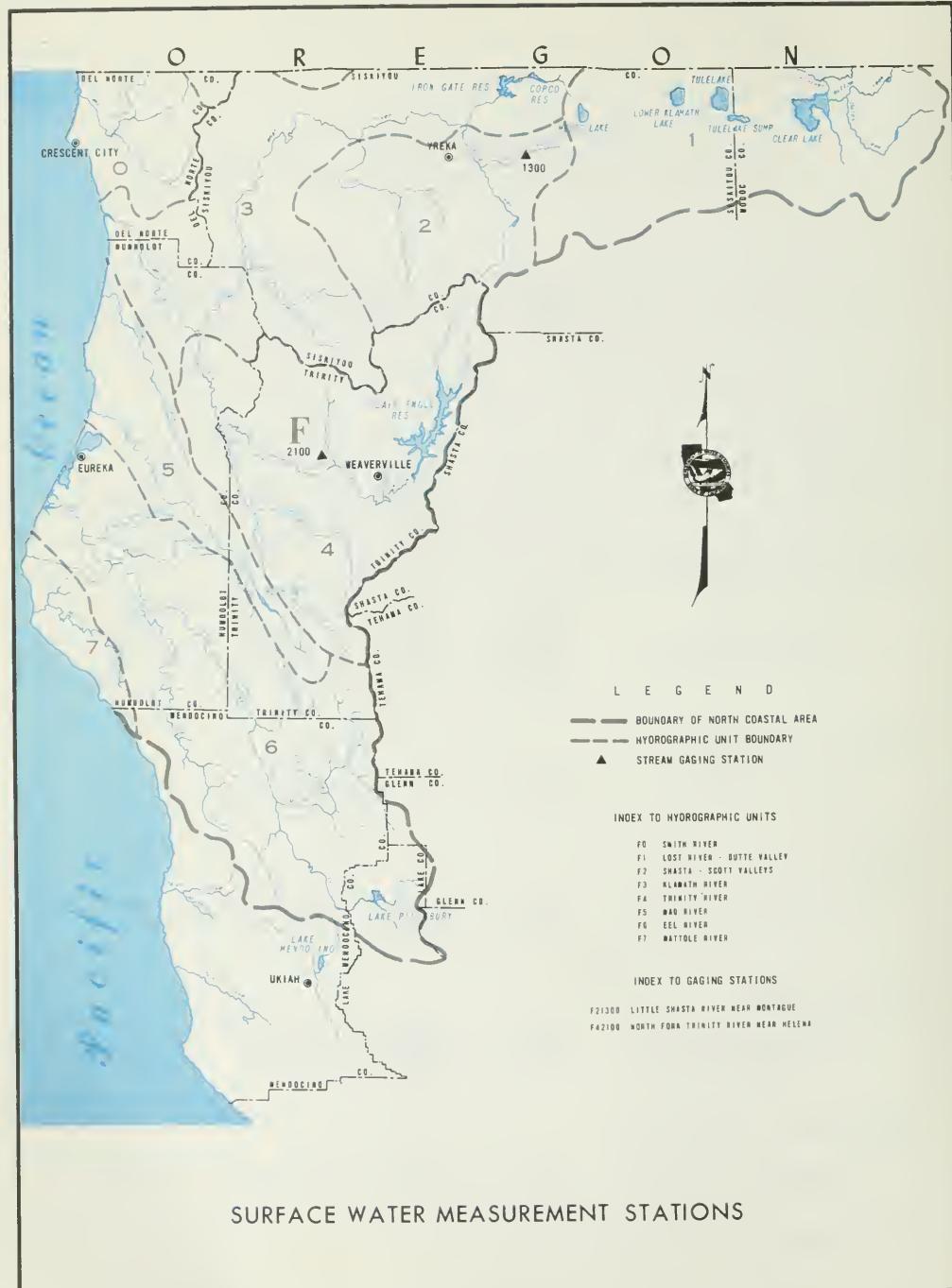
Table A-2 lists storage gages for which the seasonal accumulation of precipitation is reported. These gages are located in the remote mountain regions where no observers are available to operate conventional rain gages. Storage precipitation gages are tanks with capacity for storing an entire year's rainfall, along with antifreeze to melt frozen precipitation and oil to prevent evaporation losses. Once each year, in the summer or early fall, the precipitation that has accumulated since the last measurement is measured and then emptied out. With the addition of the proper amount of oil and antifreeze, the gage is ready to receive the next season's amount. Although logistics preclude conducting the measurement operation exactly at the end of the water year and exactly one year following the previous measurement, data from the gages fairly accurately depict the total precipitation for the water year.

TABLE A-2

STORAGE GAGE PRECIPITATION DATA
 NORTH COASTAL AREA
 (Measurements by the Department of Water Resources)

Station	Station Number	1974-75 Season		
		Measurement Period	Precipitation in Inches	
NORTH COASTAL AREA				
<u>SMITH RIVER</u>				
Camp Six Lookout	1446	6-25-74 to 6-11-75	101.28	
<u>LOST RIVER-BUTTE VALLEY</u>				
Bray 10 WSW	1050	No data. Gage removed by NWS.		
Crowder Flat	2188	6-19-74 to 6-12-75	19.66	
Long Bell Station	5081-01	6-20-74 to 6-12-75	17.08	
Medicine Lake	5505	8-29-74 to 8-28-75	43.25	
<u>SHASTA-SCOTT VALLEYS</u>				
Gazelle Lookout	3363	6-27-74 to 6-12-75	20.09	
<u>KLAMATH RIVER</u>				
Beswick 7S	0715	No data. Gage removed by NWS.		
Blue Creek Mountain	0899	6-24-74 to 6-9-75	121.97	
<u>TRINITY RIVER</u>				
Board Camp Mountain	0929	6-25-74 to 6-10-75	No data ^{1/}	
Mumbo Basin	6032	6-22-74 to 8-28-75	72.47	
<u>EEL RIVER</u>				
Plaskett	6976	6-3-74 to 6-30-75	71.45	

^{1/} Vandalism.



APPENDIX B
SURFACE WATER MEASUREMENTS

This appendix presents surface water data for the 1975 water year, the period from October 1, 1974 to September 30, 1975. The data consist of summary tables of monthly and annual unimpaired runoff from four major north coastal streams and daily mean discharges at the Department's two north coastal area gaging stations (see Figure B-1).

In addition to data collected and published by the Department of Water Resources in this appendix, the U. S. Geological Survey collects and publishes data from many additional gaging stations for the same report area. This work is done under a federal-state cooperative contract, or through cooperative arrangements with other local or government agencies. Major exportations from the north coastal area, made through the U. S. Bureau of Reclamation's Judge Francis Carr Powerplant and the Pacific Gas and Electric Company's Potter Valley Powerhouse, are shown in the USGS report listed below. The data published in the following reports together with this report present a basis for a comprehensive analysis of the water resources for the area:

1. "Water Resources Data for California
Part I. Surface Water Records
Volume 1: Colorado River Basin, Southern Great
Basin, and Pacific Slope Basins excluding
Central Valley"
United States Department of the Interior,
Geological Survey
Prepared in cooperation with the California
Department of Water Resources and with other
agencies.
2. Bulletin 120, "Water Conditions in California",
Fall Issue, Department of Water Resources.
3. Bulletin 157, "Index of Stream Gaging Stations in
and Adjacent to California, 1970". June 1971.
Department of Water Resources.

TABLE B-1

ANNUAL UNIMPAIRED RUNOFF

Unimpaired runoff is defined as the flow that would occur naturally at a point in a stream if there were: (1) no upstream controls such as dams or reservoirs; (2) no artificial diversions or accretions; and (3) no change in ground water storage resulting from development.

TABLE B-1
ANNUAL UNIMPAIRED RUNOFF

In Percent of Average

Water Year	Klamath River Copco to Orleans	Salmon River at Somesbar	Trinity River at Lewiston	Eel River at Scotia
Average Annual Runoff*	4,434	1,225	1,227	5,379
1925-26			66	61
1926-27			149	146
1927-28	86	89	86	86
1928-29	57	48	43	35
1929-30	-	63	66	65
1930-31	40	39	33	30
1931-32	76	85	59	67
1932-33	81	83	65	68
1933-34	49	47	56	46
1934-35	81	93	79	84
1935-36	90	93	83	107
1936-37	73	80	81	66
1937-38	179	182	171	200
1938-39	58	62	47	50
1939-40	102	104	131	136
1940-41	100	103	208	153
1941-42	104	108	147	138
1942-43	133	142	90	106
1943-44	62	52	53	42
1944-45	82	92	85	89
1945-46	117	124	115	112
1946-47	58	63	60	49
1947-48	96	101	98	88
1948-49	72	78	89	77
1949-50	92	96	70	77
1950-51	142	147	131	133
1951-52	149	159	148	149
1952-53	146	147	131	133
1953-54	138	131	129	129
1954-55	60	48	60	60
1955-56	186	179	165	190
1956-57	97	97	88	81
1957-58	184	184	219	217
1958-59	77	82	85	77
1959-60	78	77	84	87
1960-61	102	98	99	100
1961-62	74	78	85	73
1962-63	133	140	130	132
1963-64	90	92	65	64
1964-65	161	152	140	175
1965-66	101	91	110	96
1966-67	117	103	135	123
1967-68	76	77	82	79
1968-69	135	133	143	161
1969-70	143	130	130	139
1970-71	192	200	136	148
1971-72	142	148	94	87
1972-73	81	73	113	112
1973-74**	219	226	222	219
1974-75**	121	122	114	134

* Average annual unimpaired runoff in thousands of acre-feet adjusted to the 50-year period October 1920 through September 1970.

** Preliminary data subject to revision.

TABLE B-2
MONTHLY UNIMPAIRED RUNOFF
In Percent of Average

Month		Klamath River Copco to Orleans	Salmon River at Somesbar	Trinity River at Lewiston	Eel River at Scotia
	Percent				
October 1974	Average	53 86	53 21	2 21	16 55
November 1974	Average	39 215	30 55	32 51	8 284
December 1974	Average	44 487	34 128	39 99	31 939
January 1975	Average	56 655	59 165	41 110	43 1225
February 1975	Average	111 607	115 158	75 149	208 1176
March 1975	Average	196 588	187 158	173 157	358 795
April 1975	Average	117 627	107 179	77 217	111 550
May 1975	Average	176 587	162 192	164 241	141 239
June 1975	Average	206 335	214 108	217 123	121 79
July 1975	Average	176 125	217 35	180 36	132 22
August 1975	Average	134 67	164 15	101 13	134 10
September 1975	Average	92 56	150 10	100 9	0 7
1974-75 Water Year	Average	121 4,434	122 1,225	114 1,227	134 5,379

Note: The percent values are preliminary data subject to revision. Average annual unimpaired runoff in thousands of acre-feet adjusted to the 50-year period October 1920 through September 1970.

TABLE B-3

DAILY MEAN DISCHARGE

A stream gaging station is named after the stream and the nearest post office. Each of the two gaging stations has been assigned an identification number, the letter and first digit of which denote the hydrographic unit; the remaining digits further identify the stations.

North Coastal Area

F0 - Smith River	F4 - Trinity River
F1 - Lost River-Butte Valley	F5 - Mad River
F2 - Shasta-Scott Valleys	F6 - Eel River
F3 - Klamath River	F7 - Mattole River

The discharges estimated for periods of no record or invalid record are shown with the letter "E". Also qualified by the letter "E" are discharges obtained from extended ratings which exceed 140 percent of the highest measured flow-rate on which the rating curve was based.

The discharge figures in this table have been rounded off as follows:

1. Daily flows - cubic feet per second

0.0	- 9.9	nearest Tenth
10	- 999	" Unit
1,000	- 9,999	" Ten
10,000	- 99,999	" Hundred
100,000	- 999,999	" Thousand

2. Monthly means - cubic feet per second

0.0	- 99.9	nearest Tenth
100	- 9,999	" Unit
10,000	- 99,999	" Ten
100,000	- 999,999	" Hundred

3. Yearly totals - acre-feet

0.0	- 9,999	nearest Unit
10,000	- 99,999	" Ten
100,000	- 999,999	" Hundred
1,000,000	- 9,999,999	" Thousand

TABLE B-3
DAILY MEAN DISCHARGE
 (IN CUBIC FEET PER SECOND)

WATER YEAR		STATION NO.	STATION NAME
1975		F21300	LITTLE SHASTA RIVER NEAR MONTAGUE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	5.3	5.3	5.1	6.0	7.5	52	30	52	107	26	13	8.8	1
2	5.3	4.9	5.6	6.0	7.5	43	28	55	106	23	13	8.7*	2
3	5.4	4.9	5.7	6.2	7.2	33	26	59	105	24	12	8.4	3
4	5.4	4.9	7.5	6.2	7.2	31	23	63	101	23	12	8.1	4
5	5.4	4.9	6.0	6.5	7.3	31	21	67	98	22	12	8.0	5
6	5.3	4.9	5.7*	6.7	7.6	33	19	71	93	21	12	8.0	6
7	5.3	5.7	5.8	7.2	12	42	19	77	88	20	12	8.0	7
8	5.3	5.4	5.4	7.2	19	77	20	81	83	20	11	7.8	8
9	5.4	5.2	5.4	7.0	57	48	22	88	79	19	11	7.8	9
10	5.2	5.4	5.0	7.1	28	35	23	92	74	19	11	7.7	10
11	5.2	5.2	7.6	6.7	20	28	22	98	70	18	11	7.8	11
12	5.2	5.1	8.8	6.3	27	23	30	103	67	19	10	7.9	12
13	5.2	4.9	7.0	7.9	42	22	41	110	64	19	10	11	13
14	5.1	4.9	12	8.0	27	21*	40	114	61	18	9.9	12	14
15	5.1	4.9	23	7.8	18	21	35*	122*	59	21	9.7	8.3	15
16	5.0	4.9	13	7.5	15	18	32	127	55	20	9.4	7.8	16
17	4.9	5.2	9.0	7.2	12	15	29	125	52	18	10	7.7	17
18	4.9	6.5	6.7	7.0	13	69	29	124	49	17	12	7.6	18
19	4.9	4.9*	6.6	6.7	14	78	56	120	45	17	10	7.5	19
20	5.0	4.9	9.2	6.7	14	41	50	106	43	17	9.7	7.4	20
21	5.0	5.2	8.3	7.0	9.6	26	55	101	40	16	9.4	7.4	21
22	5.1	5.3	5.9	7.2	10	22	56	99	36	16	9.2	7.3	22
23	5.1	5.2	6.0	7.5	11	22	52	104	33	15	9.2	7.3	23
24	5.0	5.2	6.0	7.8	15	27	62	101	37	15*	8.7	7.2	24
25	5.0	5.3	6.0	8.0	21	53	52	96	38	15	8.4	7.2	25
26	5.1	5.3	5.9	8.5	25	31	42	95	34*	14	8.3*	7.1	26
27	5.2	5.3	6.0	8.8	43	24	38	99	31	14	8.4	7.0	27
28	6.0	5.3	6.2	8.3	57	21	40	100*	29	14	10	7.0	28
29	5.6	4.8	6.5	8.0	27	44	102	28	14	8.9	7.1	29	
30	5.3	5.0	6.5	7.8	41	48	104	27	14	8.9	7.0	30	
31	5.9		6.5	7.8	38		106		13		8.8		31
MEAN	5.2	5.2	7.4	7.2	19.8	35.3	36.1	95.5	61.1	18.2	10.3	7.9	MEAN
MAX	6.0	6.5	23.0	8.8	57.0	78.0	62.0	127	107	26.0	13.0	12.0	MAX
MIN	4.9	4.8	5.0	6.0	7.2	15.0	19.0	52.0	27.0	13.0	8.3	7.0	MIN
AC FT	322	307	456	445	1099	2168	2150	5873	3634	1117	633	472	TOTAL AC FT

WATER YEAR SUMMARY

MEAN DISCHARGE	MAXIMUM DISCHARGE	MINIMUM DISCHARGE	TOTAL ACRE FEET
25.8	162	3.2	18675

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD			PERIOD OF RECORD			DATUM OF GAGE			
LATITUDE	LONGITUDE	14 SEC T & R MO B AM	OF RECORD			DISCHARGE	GAGE HEIGHT OMLT	PERIOD FROM	TO	ZERO ON GAGE	BBF DATUM	PERIOD FROM	TO	ZERO ON GAGE	
			CFS	GAGE HT	DATE										
41 45 11	120 15 -	NW15 45N 0W	5910 E	10.66	12/22/64	2 - NEV 51 8	2 - NEV 51 8	1956	1964	.70	LOCAL				
						APR 52-APR 55	APR 52-APR 55								
						SEP 56-DATE	SEP 56-DATE								

Station located S of Bell Mountain Road, 12 mi. NE of Montague, 16 mi. SW of Medocel. Stage-discharge relationship affected by irrigation season only.

* = Irrigation season only.

TABLE B-3 (CONT.)
DAILY MEAN DISCHARGE
 (IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1975	742100	TRINITY RIVER NORTH FORK NEAR HELENA

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	27	35*	42	99	239	1,670	1,350	976	1,380	261	87	49	1
2	28	33	80	91	223	2,060	1,170	1,070	1,230	236	82	46	2
3	28	33	236	98	209	1,670	1,080	1,190	1,080	231	85	44	3
4	28	32	340	237	214	1,300	940	1,040	1,040	251	85	42	4
5	27	32	158*	536	221	1,070	857	864	1,140	266	83	40	5
6	27	31	116	847	278	941	763	797	1,010	256	76	38	6
7	27	48	98	833*	293	1,110	708	822	916	259	72	37	7
8	27	55	89	1,680	517	1,630	658	1,000	787	279	69	36	8
9	27	40	79	887	1,490	1,380	633	1,120	720	277	68	36	9
10	27	45	71	684	1,250	1,110	676	1,310	733	284	68	36	10
11	27	40	124	600	910	916	737	1,290	740	302	68	36*	11
12	27	36	278	492	1,290	801	834	1,250	750	301	68	35	12
13	27	35	286	423	1,770	721	1,010	1,460*	772	273	67	34	13
14	28	34	318	362	1,400*	645	1,090*	1,960*	794	249	66	37	14
15	28	34	417	359	991	619	933	1,890	773	237	63	36	15
16	27	33	289	342	769	586	805	1,540	648	247	61	35	16
17	27	35	213	341	635	601	713	1,490	511	205	62	34	17
18	27	80	167	371	566	1,320	672	1,610	417	192	69	33	18
19	27	55	139	393	1,130	2,070	712	1,570	380	190	78	32	19
20	27	46	136	418	1,460	1,510	805	1,200	356	194	69	32	20
21	27	77	151	404	1,010	1,250	867	985	371	194	63	31	21
22	27	106	133	396	784	1,060	874	931	362	183	61	30	22
23	27	62	118	387	686	976	867	1,070	340*	165*	57	30	23
24	27	54	106	422	702	1,170	1,360	1,180	306	160	58	29	24
25	28	68	96	457	806	2,550	1,420	1,070	263	145	56	29	25
26	28	60	95	432	835	1,840	1,080	1,050	242	130	54	28	26
27	33	54	134	361	1,010	1,420	914	1,150*	247	137	54	28	27
28	73	50	115	317	1,530	1,270	862	1,150	250	134	62*	28	28
29	50	46	100	278	1,130	860	1,250	231	130	60	28	29	29
30	37	44	107	247	1,330	919	1,360	1,260	246	114	55	28	30
31	36	92	256		1,550	1,460			97	52		31	
MEAN	30.2	+7.8	158	455	827	1,265	904	1,233	635	231	67.6	34.6	MEAN
MAX	71.0	106	417	1,680	1,770	2,550	1,430	1,960	1,380	302	89.0	49.0	MAX
MIN	27.0	21.0	42.0	81.0	209	586	633	797	262	97.0	52.0	28.0	MIN
AC FT	1897	2842	9765	27987	45953	77804	53810	75818	37795	13000	4159	2057	AC FT

WATER YEAR SUMMARY											
MEAN	MAXIMUM			MINIMUM			TOTAL				
DISCHARGE	DISCHARGE	GAGE HT	MO	DAY	TIME	DISCHARGE	GAGE HT	MO	DAY	TIME	ACRE FT
487.4	2850	11.57	03	25	0515	27.0	4.80	10	1	0000	352845

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD			DATUM OF GAGE		
LATITUDE	LONGITUDE	I & SEC T & R M D B A M	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD FROM	ZERO ON GAGE	REF. DATUM	
			CFS	GAGE HT	DATE						
30° 41' N	102° 11' W	WFO TRINITY RIVER NORTH FORK NEAR HELENA									

FIGURE C-1



APPENDIX C

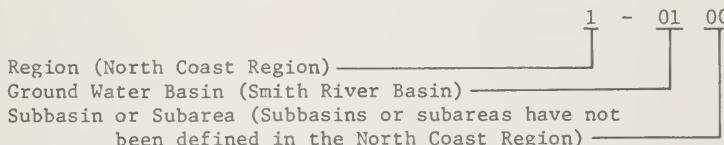
GROUND WATER MEASUREMENTS

This appendix contains ground water level measurements from 61 wells for the period October 1, 1974 through September 30, 1975. It also contains a table which summarizes the measurements. Wells in the network are continuously reviewed and, when conditions dictate, replacement wells are located and measured.

There are nine ground water basins in the North Coast Region for which data are reported.

Two numbering systems are used by the Department to facilitate the processing of water level measurement data. The two systems are the Region and Basin Designation and the State Well Numbering System as described below.

The regions are those of the California Regional Water Quality Control Boards whose geographic areas are defined in Section 13200 of the Water Code. That portion of Northern California covered by this report is included in the North Coast Region. A decimal system of the form 0-00.00 has been selected according to geographic regions, ground water basins, and subbasins or subareas as follows:



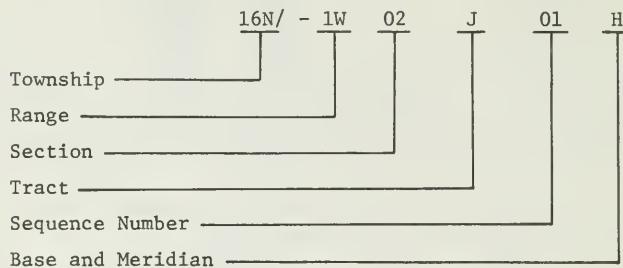
The State Well Numbering System is based on township, range, and section subdivisions of the Public Land Survey.

A section is divided into 40-acre tracts as follows:

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

Sequence numbers in a tract are generally assigned in chronological order.

The number of a well, assigned in accordance with this system, is referred to as the State Well Number, as illustrated below:



This number identifies and locates the well. In the example, the well is in Township 16 North, Range 1 West, Tract J of Section 2, located in the Humboldt Base and Meridian.

TABLE C-1

AVERAGE CHANGE OF GROUND WATER LEVELS
AND SUMMARY OF WELL MEASUREMENTS REPORTED
NORTH COASTAL AREA

		Average			Number of	
		Change			Wells Reported	
Ground Water Basin		Spring 1974	Measuring			
		to	Agency			
		Spring 1975			Fall	Spring
Name	Number	in feet			1974	1975
		:	:	:	:	:

NORTH COASTAL REGION

Smith River Plain	1-01.00	-0.9	DWR	8	8
Butte Valley	1-03.00	+1.8	DWR	15	13
Shasta Valley	1-04.00	-0.2	DWR	9	8
Scott River Valley	1-05.00	-0.7	DWR	5	5
Mad River Valley	1-08.00	-0.9	DWR	2	3
Eel River Valley	1-10.00	-1.5	DWR	7	6
Round Valley	1-11.00	-0.9	DWR	4	7
Laytonville Valley	1-12.00	-0.4	DWR	3	4
Little Lake Valley	1-13.00	-1.4	DWR	5	5

DWR - Department of Water Resources

TABLE C-2
GROUND WATER LEVELS AT WELLS

An explanation of the column headings and the code symbols follows:

State Well Number - Refer to the explanation presented on page 17.

Ground Surface Elevation - The numbers in this column are the elevation in feet above mean sea level (USGS datum) of the ground surface at the well. Elevations are usually taken from topographic maps and the accuracy is controlled by topographic standards.

Date - The date shown in the column is the date when the depth measurement given in the next column was made.

Ground Surface to Water Surface - This is the measured depth in feet from the ground surface to the water surface in the well; some of the depth measurements in the column may be preceded by a number in parentheses to indicate a questionable measurement. The code applicable to these "questionable measurements" is as follows:

- | | |
|---------------------------|---------------------------|
| (1) Pumping | (6) Other |
| (2) Nearby pump operating | (7) Recharge operation at |
| (3) Casing leaking or wet | or near well |
| (4) Pumped recently | (8) Oil in casing |
| (5) Air or pressure gage | (9) Caved or deepened |
| measurement | |

When a measurement was attempted, but could not be obtained, then only a number in parentheses is shown in the column. The code applicable to these "no measurements" is as follows:

- | | |
|-------------------------------|-------------------------------|
| (1) Pumping | (6) Well has been destroyed |
| (2) Pump house locked | (7) Special |
| (3) Tape hung up | (8) Casing leaking or wet |
| (4) Cannot get tape in casing | (9) Temporarily inaccessible |
| (5) Unable to locate well | (0) Measurements discontinued |

The words FLOW and DRY are shown in this column to indicate a flowing or dry well, respectively. A minus sign preceding the number in this column indicates that the static water level in the well is this distance in feet above the ground surface.

Water Surface Elevation - This is the elevation in feet above mean sea level (USGS datum) of the water surface in the well. It was derived by subtraction of the depth measurement from the ground surface elevation.

Agency Supplying Data - Each of these numbers is the code number for the agency supplying data for that measurement. The Department of Water Resources is the sole agency supplying ground water level measurement data for this report. It has been assigned an agency code number of 5050.

FIGURE D-1



APPENDIX D
SURFACE WATER QUALITY

This appendix presents surface water quality data collected during the period from October 1, 1974, through September 30, 1975. The data were collected from 25 stream stations in the north coastal area.

At the time of field sampling, dissolved oxygen, pH, and temperature measurements are made and gage height and time are noted. Comments on local conditions are noted in field books which are available in the files of the Department of Water Resources. The mineral constituents were determined in accordance with methods described in "Standard Methods for the Examination of Water and Waste Water", prepared and published jointly by the American Public Health Association, American Water Works Association, and Water Pollution Control Federation, 13th Edition, 1971.

Each station in this appendix has been assigned a station number. The numbering system is described in Appendix B, "Surface Water Measurements".

TABLE D-1
SAMPLING STATION DATA AND INDEX
North Coastal Area

Station	Station Number	Location*	Beginning of Record	Frequency of Sampling	Analyses on Page
BEAR RIVER AT CAPETOWN	F75100.00	01N/03W-13 H	MAY 1964	Annually	35
BLACK BUTTE RIVER NEAR COVELO	F63200.00	23N/11W-28 M	NOV. 1964	Monthly	34, 37, 43
EEL RIVER ABOVE OUTLET CREEK NEAR DOS RIOS	F61329.50	21N/13W-32 M	APR. 1958	Monthly	32, 33, 37, 43
EEL RIVER AT SCOTIA	F61100.00	01N/01E-05 H	APR. 1951	Monthly	31, 32, 37, 41, 4-
EEL RIVER AT SOUTH FORK	F61154.50	01S/02E-26 H	APR. 1951	Monthly	32, 37, 41
EEL RIVER, MIDDLE FORK, AT DOS RIOS	F63009.01	21N/13W-06 M	APR. 1958	Monthly	33, 34, 37, 43
EEL RIVER, SOUTH FORK, NEAR MIRANDA	F64100.00	03S/04E-30 H	APR. 1951	Monthly	34, 35, 37, 43
KLAMATH RIVER ABOVE HAMBURG RESERVOIR SITE	F31470.00	46N/10W-14 M	DEC. 1958	Bimonthly	29
KLAMATH RIVER AT ORLEANS	F31220.01	11N/06E-31 H	JAN. 1964	Monthly	28, 37, 41
KLAMATH RIVER BELOW IRON GATE DAM	F31599.01	47N/05W-20 M	DEC. 1961	Monthly	29, 37, 41, 45
KLAMATH RIVER NEAR KLAMATH	F31100.00	13N/02E-19 H	APR. 1951	Monthly	27, 28, 37, 41, 45
KLAMATH RIVER NEAR SELAD VALLEY	F31430.00	46N/12W-03 M	DEC. 1958	Monthly	28, 29, 37, 41
MAD RIVER NEAR ARCATA	F51100.00	06N/01E-15 H	NOV. 1958	Bimonthly	31, 37, 41
MATTOLE RIVER NEAR PETROLIA	F71100.00	02S/02W-11 H	JAN. 1959	Annually	35
MILL CREEK NEAR COVELO	F63050.00	22N/12W-22 M	FEB. 1965	Monthly	34, 37, 43
OUTLET CREEK NEAR LONGVALE	F61350.00	20N/14W-01 M	MAY 1958	Monthly	33, 37, 43
REDWOOD CREEK AT ORICK	F55100.00	10N/01E-04 H	NOV. 1958	Monthly	31, 37, 41
SAFON RIVER AT SOMESBAR	F34100.00	11N/06E-03 H	NOV. 1958	Semiannually	3
SCOTT RIVER NEAR FORT JONES	F25250.00	44N/10W-28 M	DEC. 1958	Bimonthly	27, 37, 41, 4-
SHASTA RIVER NEAR YREKA	F21050.00	46N/07W-24 M	DEC. 1958	Bimonthly	27, 37, 41, 45
SMITH RIVER NEAR CRESCENT CITY	F01300.00	16N/01E-10 H	APR. 1951	Monthly	27, 37, 41, 45
TRINITY RIVER AT HOOPA	F41080.00	08N/04E-25 H	APR. 1951	Monthly	30, 37, 41, 45
TRINITY RIVER AT LEWISTON	F41640.00	33N/08W-17 M	APR. 1951	Bimonthly	30, 31, 37, 41
TRINITY RIVER NEAR BURNT RANCH	F41376.00	05N/07E-19 H	APR. 1958	Bimonthly	3, 37, 41, 45
VAN DUZEN RIVER NEAR BRIDGEVILLE	F65270.00	01N/02E-12 H	APR. 1958	Monthly	35, 39, 43, 45

* N = North; E = East; W = West; S = South
M = Mean; D = Discharge; B = Base; M = Median

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

Lab and Sampler Agency Code

5050 - Department of Water Resources

Abbreviations

<u>TIME</u>	- Pacific Standard Time on a 24-hour clock
<u>G.H.</u>	- Instantaneous gage height in feet above an established datum
<u>Q</u>	- Instantaneous discharge measured in cubic feet per second (cfs). "E" indicates the value has been estimated.
<u>DEPTH</u>	- Depth at which sample was collected
<u>DO</u>	- Dissolved oxygen content in milligrams per liter
<u>SAT</u>	- Percent of normal dissolved oxygen saturation
<u>TEMP</u>	- Water temperature in degrees Fahrenheit (F) and Celsius (C)
<u>PH</u>	- Measure of acidity or alkalinity of water
<u>EC</u>	- Electrical conductance in micromhos at 25° C.
<u>TDS</u>	- Gravimetric determination of total dissolved solids at 180° C.
<u>SUM</u>	- Total dissolved solids by summation of analyzed constituents
<u>TH</u>	- Total hardness
<u>NCH</u>	- Noncarbonate hardness - any excess of total hardness over total alkalinity
<u>TURB</u>	- Jackson Turbidity Units measured with a Hellege Turbidimeter (E) or a Hach Nephelometer (A). Field determination (F).
<u>SAR</u>	- Sodium adsorption ratio
<u>PERCENT</u>	Determined by dividing the sum of the cations or anions in milliequivalents per liter into each constituent in milliequivalents per liter arriving at a percentage. For a partial analysis, an approximate value is determined by multiplying the electrical conductance by 0.01 and using that as the cation or anion sum.
<u>REACTANCE</u>	
<u>VALUE</u>	

Mineral Constituents

B	- Boron	K	- Potassium
CA	- Calcium	MG	- Magnesium
CL	- Chloride	NA	- Sodium
CO ₃	- Carbonate	NO ₃	- Nitrate
F	- Fluoride	SiO ₂	- Silica
HC _{CO} ₃	- Bicarbonate	SO ₄	- Sulfate

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.M. C	DO SAT	TEMP F EC	FIELD PH	LABORATORY EC	MINERAL CONSTITUENTS IN MILLIEQUIVALENTS PER LITER							MILLIGRAMS PER LITER					
							CA	HO	NA	K	C03	HCO3	S04	CL	N03	B	F		
F1 1300.00 SMITH RIVER NEAR CHELSEA CITY																			
10/02/74 0850	5v5n		9.7 94	57.2F 14.0C	7.8	159	--	--	--	--	--	--	--	--	--	--	--	--	
		205																1AF	
11/13/74 0415	5v5n		11.4 101	54.0F 14.0C	7.6	146	--	--	--	--	--	--	--	--	--	--	--	0AF	
12/03/74 082n	5v5n		10.9 94	46.2F 9.0C	7.8	118	--	--	--	--	--	--	--	--	--	--	--	3AF	
01/07/75 0745	5v5n		11.7 11600	46.4F 9.0C	7.3	77	--	--	--	--	--	--	--	--	--	--	--	1AF	
02/19/75 0810	5v5n		12.6 19200	48.2F 14.0C	7.4	70	--	--	2.0 +0.9 12	--	0 +0.0	39 +64	--	1.3 +0.6	--	+20	--	33 17A 0.2	
03/11/75 0720	5v5n		11.9 5680	43.7F 6.5C	7.6	81	--	--	--	--	--	--	--	--	--	--	--	2AF	
04/15/75 0700	5v5n		12.61 3400	42.8F 6.0C	8.2	86	--	--	1.5 +0.7 8	--	0 +0.0	50 +92	--	1.5 +0.4	--	+0.0	--	30 1A 0.1	
05/13/75 0720	5v5n		10.9 +380	5.5F 97 11.0C	7.4	78	--	--	--	--	--	--	--	--	--	--	--	1AF	
06/10/75 0620	5v5n		9.3 94	81.8F 16.0C	7.4	107	--	--	--	--	--	--	--	--	--	--	--	1AF	
07/07/75 1700	5v5n		9.5 67.0	66.2F 19.0C	8.1	126	--	--	--	--	--	--	--	--	--	--	--	0AF	
08/11/75 1615	5v5n		9.2 312	64.8F 21.0C	8.2	146	--	--	--	--	--	--	--	--	--	--	--	0AF	
09/02/75 1615	5v5n		7.8J 304	10.1F 105 16.0C	8.0	144	--	--	2.6 +1.1 7	--	0 +0.0	85 +1.31	--	2.5 +0.7	--	+0.0	--	70 0A 0.1	
F2 1550.00 SHASTA RIVER NEAR YREKA																			
11/08/74 0740	5.5n		11.4 205	46.4F 14.0C	8.2	507	--	--	--	--	--	--	--	--	--	--	--	3AF	
01/15/75 0945	5.5n		3.57 222	11.9 97	34.2F +0.0C	8.2	50P	--	--	42 +1.83 27	--	7.0 +2.3	31.0 5.15	--	2.6 +0.6	--	+0.0	--	251 1A 1.2
03/18/75 125n	5.5n		6.32 184.	10.5 9	42.6F 6.0C	8.2	335	21	22	23	3.5	0	198	14	8.7 +2.5	5.7 +0.9	+30	--	>13 10A 0.6
05/05/75 122n	5v5n		3.62 260	10.2 101	53.6F 12.0C	8.2	517	--	--	32 +1.39 22	--	0 +0.0	310 5.08	--	1.7 +0.0	--	+4.0	--	240 1A 0.9
07/17/75 152n	5.5n		3.19 112	7.3 95	78.6F 20.0C	8.2	538	--	--	--	--	--	--	--	--	--	--	3AF	
09/18/75 1030	5v5n		3.06 83	9.4 101	66.6F 16.0C	8.4	605	--	--	--	--	--	--	--	--	--	--	2AF	
F2 5250.00 SCOTT RIVER NEAR FORT JONES																			
11/08/74 1100	5.5n		5.35 164	12.7 117	46.4F 6.0C	7.8	192	--	--	--	--	--	--	--	--	--	--	2AF	
01/15/75 1245	5.5n		6.02 338	11.4 95	41.0F 5.0C	7.4	211	--	--	--	--	--	--	--	--	--	--	3AF	
05/05/75 1335	5v5n		7.83 130	10.4 99	51.8F 11.0C	8.2	176	--	--	2.6 +1.1 6	--	0 +0.0	105 1.72	--	1.1 +0.3	--	+0.0	--	60 7A 0.1
07/17/75 1425	5.5n		6.27 433	4.5 117	71.6F 22.0C	8.0	201	--	--	--	--	--	--	--	--	--	--	3AF	
09/17/75 1535	5.5n		5.36 86	11.6 141	66.6F 21.0C	8.4	310	--	--	--	--	--	--	--	--	--	--	1AF	
F3 1100.00 KLAMATH RIVER NEAR Klamath																			
10/02/74 0832	5v5n		8.7 850	6.0F 16.0C	8.1	224	--	--	--	--	--	--	--	--	--	--	--	1AF	
11/13/74 1000	5v5n		10.1 5120	5.9F 16.5C	7.6	212	--	--	--	--	--	--	--	--	--	--	--	4AF	
12/02/74 1530	5v5n		10.7 5500	4.7 6.0C	6.6F 8.0C	8.1	208	--	--	--	--	--	--	--	--	--	--	0AF	

TABLE D-2 cont
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER L#	G.M. U	DO SAT	TEMP FH EC	FIELD LABORATORY KH EC	MINERAL CONSTITUENTS IN CA MG NA K CO3 HCO3 SO4 CL NO3	MILLIGRAMS PER LITER			MILLIGRAMS PER LITER								
							PERCENT	REACTANCE VALUE	MILLIEQUIVALENTS PER LITER	8 SI02	F SUM	TDS NCH TH TURB SAR						
F3 1100:00 Klamath River Near Klamath																		
CONTINUED																		
01/07/75 0940	5.50	31000	11.5 97	46.4F 4.0C	7.5	119	--	--	--	--	--	--						
02/18/75 1555	5.50	27000	1n.7 85	47.3F 0.5C	7.4	168	--	--	--	--	--	--						
03/10/75 1505	5.50	42001	11.2 97	4d.2F 4.0C	7.5	140	--	--	--	--	--	--						
04/14/75 1435	5.50	27200	1n.8 95	5d.0F 1.0C	7.6	150	--	--	5.0 +22 14	0 +.00	82 1.34	--						
05/12/75 1515	5.50	42100	10.4 100	5d.3F 13.5C	7.4	122	--	--	--	--	--	--						
06/09/75 1500	5.50	25800	9.5 98	6d.6F 17.0C	7.6	111	--	--	--	--	--	--						
07/07/75 1505	5.50	7170	8.7 95	6d.0F 2.0C	7.6	148	--	--	--	--	--	--						
08/11/75 1450	5.50	3100	9.1 103	71.6F 22.0C	8.4	181	--	--	6.8 +30 16	0 +.00	95 1.56	--						
09/02/75 1520	5.50	3310	9.0 109	6d.9F 2.5C	8.4	194	--	--	--	--	--	--						
F3 1201:00 Klamath River At Orleans																		
10/01/74 1030	5.50	2834 2440	10.4 108	6d.6F 17.0C	7.6	230	--	--	--	--	--	--						
11/12/74 1240	5.50	3750	11.3 103	51.8F 11.0C	8.0	209	--	--	--	--	--	--						
12/02/74 1200	5.50	4190	3.49 96	11.6 7.0C	4d.6F 6.2	210	--	--	--	--	--	--						
01/06/75 1320	5.50	17000	12.9 105	42.8F 6.0C	7.5	108	--	--	--	--	--	--						
02/18/75 1145	5.50	11800	8.18 104	13.3 6.0C	4d.8F 6.3	172	--	--	--	--	--	--						
03/10/75 1120	5.50	15200	9.44 101	11.7 8.5C	47.3F 8.2	103	--	--	--	--	--	--						
04/14/75 1115	5.50	16000	9.20 96	11.7 9.0C	4d.2F 6.0	159	--	--	6.4 +28 18	0 +.00	87 1.43	--						
05/12/75 1110	5.50	22000	11.67 104	11.3 13.0C	55.4F 7.8	122	--	--	--	--	--	--						
06/09/75 1000	5.50	15800	10.57 100	54.0F 15.0C	6.4	107	--	--	--	--	--	--						
07/07/75 1120	5.50	4850	9.0 99	6d.0F 21.0C	7.9	133	--	--	5.0 +22 16	0 +.00	71 1.16	--						
08/11/75 1105	5.50	2330	1.74 106	7d.3F 23.5C	8.2	180	--	--	8.0 +38 21	0 +.00	95 1.56	--						
09/02/75 1105	5.50	2340	1.71 105	9.7 19.0C	6d.2F 8.2	193	--	--	--	--	--	--						
F3 1430:00 Klamath River Near Seiad Valley																		
10/08/74 1125	5.50	1460	10.2 103	57.2F 14.0C	6.1	244	--	--	--	--	--	--						
11/08/74 0940	5.50	3610	11.7 107	4d.1E 0.5C	8.2	189	--	--	--	--	--	--						
12/09/74 1350	5.50	3510	12.4 104	44.6F 7.0C	7.9	204	--	--	--	--	--	--						
01/15/75 1120	5.50	4210	12.2 94	37.4E 3.0C	7.6	200	--	--	--	--	--	--						
02/14/75 1200	5.50	5440	11.6 95	41.0F 5.0C	7.6	211	--	--	--	--	--	--						

TABLE D-2 CONT
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLE# LAB	G.M. Q.	DO SAT	TEMP PH	FIELD LABORATORY EC	MINERAL CONSTITUENTS IN CA MG NA K CO ₃ HCO ₃ SO ₄ CL NO ₃	MILLIGRAMS PER LITER			MILLIGRAMS PER LITER								
							PERCENT EQUIVALENTS PER LITER	REACTANCE VALUE	R 5102 SUM	F TDS NOM	TH TH TURB SAR							
F3 1434.00 KLAMATH RIVER NEAR SEILO VALLEY																		
CONTINUED																		
03/18/75 1505	5.5n 5.5n	12.1 1496n	37.5F 93	7.7 3.0C	172 187	-- -- 9.6 -- 0 94 -- 3.8 -- .00 --	.43 22	.00 1.54	+11	--	--	78 40A 0.5						
04/15/75 123n	5.5n	773v	11.3 102	48.2F 4.8C	8.1	208 -- -- -- -- -- -- -- --	--	--	--	--	--	15AF						
05/05/75 142n	5.5n	871n	10.7 99	5.0F 1.0C	8.0	195 -- -- -- -- -- -- -- --	--	--	--	--	--	10AF						
06/03/75 121n	5.5n 5.5n	9.5 997n	6.0F 10.0C	7.8	116 -- -- 4.9 -- 0 60 -- 4.2 -- .00 --	.21 18	.00 .98	+12	--	--	--	47 25A 0.3						
07/18/75 073n	5.5n	242v	8.2 41	65.3F 10.5C	7.4	211 -- -- -- -- -- -- -- --	--	--	--	--	--	3AF						
08/06/75 113n	5.5n	10.1 147v	10.1 21.0C	6.0F 8.0C	8.3	201 -- -- -- -- -- -- -- --	--	--	--	--	--	8AF						
09/18/75 0900	5.5n	9.1 94	6.1 10.0C	8.8F 8.0C	8.7	226 -- -- -- -- -- -- -- --	--	--	--	--	--	2AF						
F3 1421.00 KLAMATH RIVER ABOVE HAMBURG RESERVOIR SITE																		
11/07/74 085n	5.5n	11.1 318v	4.6F 9.5C	7.4	191 -- -- -- -- -- -- -- --	--	--	--	--	--	--	5AF						
01/15/75 103n	5.5n	12.1 329v	35.6F 2.0C	7.4	197 -- -- 16 -- 0 94 -- 5.7 -- +20 --	.70 36	.00 1.54	+16	--	--	--	63 3A 0.9						
03/18/75 140n	5.5n	11.2 774v	34.9F 9.1	7.4	193 -- -- 14 -- 0 103 -- 7.5 -- +18 --	.61 27	.00 1.69	+21	--	--	--	83 20A 0.7						
05/05/75 132n	5.5n	10.7 500v	51.6F 11.0C	8.0	209 -- -- -- -- -- -- -- --	--	--	--	--	--	--	7AF						
06/11/75 0855	5.5n	11.5 96	47.0F 8.0C	7.9	195 -- -- -- -- -- -- -- --	--	--	--	--	--	--	5AF						
07/18/75 0845	5.5n	8.4 110v	60.0F 9.7	8.1	215 -- -- -- -- -- -- -- --	--	--	--	--	--	--	9AF						
09/18/75 0945	5.5n	8.6 94	64.4F 10.0C	7.8	223 -- -- -- -- -- -- -- --	--	--	--	--	--	--	2AF						
F3 1594.01 KLAMATH RIVER BELOW IRON GATE DAM																		
10/08/74 095n	5.5n	9.9 152	5.0F 15.0C	8.6	205 -- -- -- -- -- -- -- --	--	--	--	--	--	--	2AF						
11/07/74 163n	5.5n	9.2 295	5.0F 1.0C	7.2	176 -- -- 17 -- 0 96 -- 4.0 -- +16 --	.74 39	.00 1.57	+11	--	--	--	57 1A 1.0						
12/09/74 110n	5.5n	10.5 280v	44.6F 9.7	7.0	179 -- -- -- -- -- -- -- --	--	--	--	--	--	--	6AF						
01/15/75 0900	5.5n	12.2 377	35.6F 2.0C	7.4	163 -- -- -- -- -- -- -- --	--	--	--	--	--	--	10AF						
02/18/75 1015	5.5n	12.1 310v	37.4F 9.5	7.4	176 -- -- -- -- -- -- -- --	--	--	--	--	--	--	10AF						
03/18/75 1145	5.5n 5.5n	12.1 590v	44.6F 1.17	7.0C	190 -- -- 16 -- 0 86 -- 4.2 -- +00 --	.70 34	.00 1.38	+12	--	--	--	67 30A 0.9						
04/15/75 0945	5.5n	11.4 280v	45.5F 10.4	7.8	176 -- -- -- -- -- -- -- --	--	--	--	--	--	--	10AF						
05/15/75 1135	5.5n 5.5n	11.4 974	5.0F 1.0C	7.5	188 -- -- 16 -- 0 82 -- 4.2 -- +00 --	.70 36	.00 1.34	+14	--	--	--	56 3A 0.9						
06/03/75 0926	5.5n	10.2 124v	62.6F 11.3	8.2	163 -- -- -- -- -- -- -- --	--	--	--	--	--	--	3AF						
07/18/75 1435	5.5n	9.2 94	71.0F 11.2	8.1	157 -- -- -- -- -- -- -- --	--	--	--	--	--	--	2AF						
08/06/75 0955	5.5n	9.1 99	57.4F 10.9	8.4	166 -- -- -- -- -- -- -- --	--	--	--	--	--	--	3AF						
09/18/75 111n	5.5n	8.1 147v	60.2F 9.2	8.0	197 -- -- -- -- -- -- -- --	--	--	--	--	--	--	1AF						

TABLE D-2 cont
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLE# L-R	G.M. Q	DU DAT	TEMP F PH EC	FIELD LABORATORY	MINERAL CONSTITUENTS IN CA MG NA K CO ₃ HCO ₃ SO ₄ CL NO ₃	MILLIGRAMS PER LITER			MILLIGRAMS PER LITER								
							PERCENT REACTANCE	VALUE	B	F	TDS	TH	TURB SUM	NH ₃	SAR			
F3 4100.00 SALMON RIVER AT SOMESBAR																		
10/01/74 1115	SJ5n	4+2	10+3	6+8F 16.0C	7.9	149	--	--	--	--	--	--	--	--	1AF			
06/09/75 1035	SJ5n	7.07 440C	11+1 103	53+BF 12.0C	7.9	54	--	--	--	--	--	--	--	--	6AF			
F4 1080.00 TRINITY RIVER AT MOOPA																		
10/01/74 0936	SJ5n	13+4n SJ5	10+2 102	6+8F 16.0C	8+0	203	--	--	--	--	--	--	--	--	1AF			
11/12/74 1100	SJ5n	13+2 709	11+2 1C1	51+BF 14.5C	7.9	209	--	--	--	--	--	--	--	--	1AF			
12/02/74 1100	SJ5n	13+8y 811	11+3 96	46+BF 8.0C	8+1	208	--	--	--	--	--	--	--	--	1AF			
01/06/75 1215	SJ5n SJ5n	12+14 153JU	12+5 101	42+BF 8.0C	7.8	122	--	--	2.6 .12 .9	0 .00	.87 1+10	--	2+1 .00	+10	81 0.2			
02/18/75 1314	SJ5n	14+5 872P	12+0 104	44+BF 7.0C	7+4	151	--	--	--	--	--	--	--	--	44AF			
03/10/75 1020	SJ5n	22+2y 1610v	11+1 94	46+BF 8.0C	8+4	131	--	--	--	--	--	--	--	--	110AF			
03/12/75 1050	SJ5n SJ5n	11+5 8-00E	9+4 94	46+BF 8.0C	7.5	141	17 .85 .59	5.5 .45 .31	2+6 .11 8	7 0 1	0 .00 1.23 89	.75 +.00 1.23 89	+.8 +.05 +.00	+10 +.05 +.00	82 70	65 4	85A 0.1	
04/14/75 1005	SJ5n	19+8d 896P	10+9 95	46+BF 9.0C	7+6	148	--	--	2+2 .10 7	0 .00	.83 1.36	--	1.0 .13	-.00	--	70	38A 0.1	
05/12/75 1110	SJ5n	9380	10+4 97	53+BF 12.0C	8+2	115	--	--	2+0 .09 8	0 .00	0 1.03	--	+.7 .02	+.00	--	54	22A 0.1	
06/09/75 0904	SJ5n	13+7y 518P	9+2 94	46+BF 18.0C	7+5	104	--	--	2+1 .09 9	0 .00	.56 .92	--	1.9 .05	+.00	--	48	10A 0.1	
07/07/75 1020	SJ5n	17+4y 1760	9+9 94	66+PF 21.0C	7+8	149	--	--	--	--	--	--	--	--	1AF			
08/11/75 0945	SJ5n	14+6y 755	9+9 101	7+7P 21.5C	8+0	194	--	--	--	--	--	--	--	--	1AF			
09/02/75 1200	SJ5n SJ5n	9+6 673	10+6 106	60+PF 20.0C	8+2	190	--	--	4+2 .18 9	0 .00	1.02 1.67	--	4+0 .11	+.00	--	92 0.2		
F4 1370.00 TRINITY RIVER NEAR BURNT RANCH																		
11/12/74 1000	SJ5n	11+1 423	97	47+3F 8.5C	7.5	155	--	--	--	--	--	--	--	--	1AF			
01/06/75 1030	SJ5n	12+5 250P	101	41+PF 5.0C	7.3	109	--	--	--	--	--	--	--	--	22AF			
03/10/75 0915	SJ5n	11+0 443P	99	44+BF 7.0C	7.5	129	--	--	--	--	--	--	--	--	66AF			
03/12/75 1415	SJ5n SJ5n	11+1 550	97	66+PF 7.0C	7.4	141	1b .56	6.1 .35	2+8 .12 8	4 0.1	0 .00	75 1.23 91	4+3 .09 2	1.0 .03 .00	+.00	82 68	65 4	25A 0.2
05/12/75 091n	SJ5n SJ5n	10+4 421P	98	52+7F 11.5C	7+4	98	--	--	1.8 .08 8	0 .00	.54 .69	--	+.6 .02	+.00	--	45	8A 0.1	
07/07/75 0930	SJ5n	9+1 1000	103	66+PF 21.0C	7+8	115	--	--	--	--	--	--	--	--	1AF			
09/02/75 093n	SJ5n	9+7 3+3	104	64+BF 18.0C	8+0	158	--	--	--	--	--	--	--	--	1AF			
F4 1640.00 TRINITY RIVER AT LEONSTON																		
11/12/74 0830	SJ5n SJ5n	3+4y 282	11+4 107	46+4F 8.0C	7.4	78	--	--	2.5 .11 .13	0 .00	.55 .90	--	1.0 .13	+.00	--	37 0.2		
03/10/75 0735	SJ5n	3+11 171	10+9 95	44+6F 7.0C	7+2	87	--	--	--	--	--	--	--	--	3AF			
05/12/75 0730	SJ5n	5+17 1380	11+2 103	46+2F 9.0C	7.5	78	--	--	1.6 .07 9	0 .00	.45 .74	--	+.8 .02	+.00	--	36 0.1		
07/07/75 0800	SJ5n	3+11 167	10+3 100	52+7F 11.5C	7+6	81	--	--	--	--	--	--	--	--	2AF			

TABLE D-2 cont
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLE LAB	U.H. Q	DO SAT	TEMP PH	FIELD LABORATORY EC	MINERAL CONSTITUENTS IN MILLIEQUIVALENTS PER LITER						MILLIGRAMS PER LITER						
						CA	MG	NA	K	CO ₃	HCO ₃	SO ₄	CL	NH ₃	B	F	SIO ₂	
F6 3009*01 EEL RIVER MIDDLE FORK AT DOS RIOS																		
09/04/75 0900	5550	7.21 3h	9.3 105	68.0F 2m.0C	8.1	295	--	--	--	--	--	--	--	--	--	--	--	DAF
FB 3051*00 MILL CREEK NEAR COVELO																		
12/04/74 1100	5550	11.3 94E	48.4F 9m	7.5 8.0C	16A	--	--	--	--	--	--	--	--	--	--	--	--	113AF
01/08/75 1510	5550	11.5 204E	48.4F 97	7.3 8.0C	108	--	--	--	--	--	--	--	--	--	--	--	--	100AF
02/20/75 1120	5550 5550	11.5 256E	48.4F 101	6.0C 7.5	121	--	--	4.6 .20	0	66 1.05	--	+.0	--	.1n	--	--	53 804 0.3	
03/12/75 0900	5550	10.5 206E	45.5F 91	8.4 7.5C	174	--	--	--	--	--	--	--	--	--	--	--	--	12AF
04/16/75 0905	5550 5550	10.5 RUE	48.4F 93	6.0C 8.0C	209	--	--	5.8 .25	0 1.2	116 1.90	--	1.3 .04	--	.10	--	--	96 24 0.3	
05/14/75 0835	5550 5550	R+3 5550	61.7F RA	7.4 16.5C	262	--	--	7.3 .32	0 +.00	151 2.47	--	2.4 .06	--	.00	--	--	122 04 0.3	
06/11/75 0915	5550	7.2 SE	68.0F 84	7.4 21.0C	349	--	--	--	--	--	--	--	--	--	--	--	--	14F
F6 3200*01 BLACK HUTTE RIVER NEAR COVELO																		
10/03/74 1110	5550	1.53 4.4	4.2 107	68.9F 2.5C	H.2	335	--	--	--	--	--	--	--	--	--	--	--	1AF
11/14/74 1100	5550	1.70 11	10.9 103	51.0F 11.0C	8.0	347	--	--	--	--	--	--	--	--	--	--	--	0AF
12/04/74 1155	5550 5550	12.50 280	10.7 92	48.4F 7.0C	7.6 7.7	182 175	--	--	3.8 .17	0 1.0	66 1.05	--	+.0	--	.20	--	79	U.2
01/08/75 1610	5550 5550	11.94 17.0	12.1 99	41.0F 5.0C	7.4 7.8	106 116	--	--	3.0 .13	0 +.00	53 +.87	--	+.0	--	.10	--	53 280A 0.2	
02/20/75 1230	5550 5550	11.84 19.00	12.5 105	48.4F 6.0C	7.7 7.7	103 112	--	--	3.8 .17	0 +.00	57 +.93	--	+.0	--	.20	--	53 310A 0.2	
03/12/75 0950	5550	12.45 400	11.5 94	41.0F 5.0C	7.6	132	--	--	--	--	--	--	--	--	--	--	--	50AF
04/16/75 0745	5550 5550	12.94 410	12.0 96	39.2F 4.0C	7.6 R.0	141	--	--	2.8 .12	0 9	66 1.68	--	+.0	--	.00	--	64 18A 0.2	
05/14/75 0715	5550	12.15 850	10.9 97	47.3F 5.5C	7.5	87	--	--	--	--	--	--	--	--	--	--	--	56AF
06/11/75 1000	5550	11.77 641	7.8 84	62.6F 17.0C	H.1	143	--	--	--	--	--	--	--	--	--	--	--	4AF
07/08/75 1700	5550	12.47 94	7.8 94	75.2F 24.0C	H.1	210 202	--	--	3.6 .16	0 8	95 1.56	--	1.4 .04	--	.00	--	95 04 0.2	
08/12/75 1000	5550	9.11 11	7.2 92	76.8F 26.0C	H.2	251	--	--	5.0 .22	0 8	114 1.87	--	2.0 .06	--	.00	--	120 04 0.2	
09/04/75 0700	5550 5550	9.24 17	H.7 94	62.6F 17.0C	H.2	276	--	--	5.2 .23	0 8	121 1.98	--	1.0 .03	--	.00	--	130 04 0.2	
F6 4100*00 EEL RIVER SOUTH FORK NEAR MIRANDA																		
10/03/74 0700	5550	4.41 41	8.3 R3	59.0F 15.0C	7.8	283	--	--	--	--	--	--	--	--	--	--	--	1AF
11/13/74 1520	5550	4.73 97	11.0 106	56.3F 13.5C	H.1	284	--	--	--	--	--	--	--	--	--	--	--	1AF
12/03/74 1505	5550	6.83 1500	10.40 91	51.0F 11.0C	8.4	177	--	--	--	--	--	--	--	--	--	--	--	225AF
01/07/75 1510	5550	9.58 1600	11.3 101	51.0F 10.0C	7.6	90	--	--	--	--	--	--	--	--	--	--	--	248AF
02/19/75 1725	5550 25200	15.50 104	11.7 1.00	51.0F 1.00C	7.8	95	--	--	3.8 .17	0 7	68 +.79	--	.7 .02	--	.10	--	41 1170A 0.3	
03/11/75 1350	5550	8.76 5830	10.4 94	51.0F 11.5C	7.6	117	--	--	--	--	--	--	--	--	--	--	--	72AF

TABLE D-2 CONT
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLE#	G.M.	DO	TEMP PM	FIELD LABORATORY EC	MINERAL CONSTITUENTS IN CA MG NA K CO ₃ HCO ₃ SO ₄ CL NO ₃	MILLIGRAMS PER LITER		MILLIGRAMS PER LITER									
							PERCENT REACTANCE	VALUE	B	F	TDS	TH						
FH 1100.00 ERL RIVER SOUTH FORK NEAR MIRANDA																		
CONTINUED																		
04/15/75 1430	5-5n 110n	5.5n 9.2	5.5n 8.3	51.4F 8.0	8.3 142	-- -- 5.2 -- 0 71 -- 2.8 -- .00 --	--	--	--	--	59	64						
						-- -- 2.3 -- .00 1.16 -- .08 --					0.3							
05/13/75 1350	5-5n 107	5.8d 6.5	4.5 107	64.8F 21.0C	8.0	157 -- -- -- -- -- -- -- --	--	--	--	--	--	1AF						
06/10/75 1520	5-5n 116	5.17 2.9	4.5 116	77.4F 25.0C	8.2	207 -- -- -- -- -- -- -- --	--	--	--	--	--	1AF						
07/08/75 1400	5-5n 138	6.02 114	9.6 2.0C	75.2F R.2	224	-- -- -- -- -- -- -- --	--	--	--	--	--	1AF						
08/12/75 1300	5-5n 141	4.89 0.1	11.7 25.0C	77.0F R.4	214	-- -- -- -- -- -- -- --	--	--	--	--	--	1AF						
09/03/75 1535	5-5n 28	4.86 12	10.2 23.5C	74.3F 8.2	238	-- -- -- -- -- -- -- --	--	--	--	--	--	1AF						
Fd 5274.00 VAN DUZEN RIVER NEAR BRIDGEVILLE																		
10/02/74 1430	5-5n 7+1	3.9n 104	10.1 104	42.6F 17.0C	8.0	299 -- -- -- -- -- -- --	--	--	--	--	--	1AF						
11/13/74 1245	5-5n 32	3.49 107	11.5 12.0C	53.6F R.3	7.0	282 -- -- -- -- -- -- --	--	--	--	--	--	1AF						
12/03/74 1215	5-5n 18C	6.74 4.7	10.5 4.0C	46.2F 7.0	7.0	146 -- -- -- -- -- -- --	--	--	--	--	--	140AF						
01/07/75 1210	5-5n 2500	7.36 96	11.3 8.0C	45.4F 7.0	7.0	107 -- -- 3.4 -- 0 56 -- 1.9 -- .10 --	--	--	--	--	50	170A 0.2						
						-- -- 1.5 -- .00 .92 -- .05 --												
02/19/75 1515	5-5n 1120J	12.43 162	12.0 8.0C	46.4F 7.5	8.0	81 -- -- 3.6 -- 0 52 -- .10 --	--	--	--	--	45	850A 0.2						
						-- -- 1.6 -- .00 .85 -- .00 --												
03/11/75 113n	5-5n 159J	6.25 97	11.1 9.0C	47.4F 7.0	100	-- -- -- -- -- -- --	--	--	--	--	--	53AF						
						-- -- 1.5 -- .00 .92 -- .00 --												
04/15/75 114n	5-5n 5.5n	5.62 912	11.4 9.7	46.0F H.0C	8.0	110 -- -- 2.6 -- 0 56 -- .0 -- .00 --	--	--	--	--	49	174 0.2						
						-- -- 1.2 -- .00 .92 -- .00 --												
05/13/75 1120	5-5n 65d	5.49 90	9.3 1H.0C	64.4F 7.0	7.0	121 -- -- -- -- -- -- --	--	--	--	--	--	7AF						
06/10/75 1045	5-5n 139	5.84 95	9.0 21.0C	61.0F R.7	7.0	176 -- -- -- -- -- -- --	--	--	--	--	--	1AF						
07/08/75 1145	5-5n 51	4.10 104	9.2 19.0C	66.2F R.2	8.2	211 -- -- -- -- -- -- --	--	--	--	--	--	1AF						
08/12/75 1000	5-5n 1n	4.14 9.8	8.9 2.0C	66.0F R.2	8.0	260 -- -- -- -- -- -- --	--	--	--	--	--	1AF						
09/03/75 1220	5-5n 16	4.08 110	10.2 23.0C	73.4F 8.4	247	-- -- -- -- -- -- --	--	--	--	--	--	1AF						
F7 1100.00 MATTOLE RIVER NEAR PETROLIA																		
10/02/74 1235	5-5n 26	2.74 136	12.3 2.5C	60.0F R.2	8.0	270 -- -- -- -- -- -- --	--	--	--	--	--	10AF						
02/19/75 1315	5-5n 7650	4.34 9n	10.9 1.0C	5.0F R.3	8.0	101 -- -- -- -- -- -- --	--	--	--	--	--	10AF						
09/03/75 1135	5-5n 37	3.34 99	9.2 1.0C	66.2F R.0	8.0	260 -- -- -- -- -- -- --	--	--	--	--	--	1AF						
F7 5103.00 NEAR RIVER AT CAPE TOWN																		
10/02/74 1120	5-5n 1vt	10.2 105	62.6F 17.0C	8.1	342	-- -- -- -- -- -- --	--	--	--	--	--	1AF						
						-- -- 2.2 -- .00 .97 -- .00 --												
02/19/75 1200	5-5n 300t	11.1 50	5.0F 1.0C	7.3	109	12 2.2 8.2 2.6 0 38 8.4 8.4 1.5 .30 --	--	--	--	--	62	39 0 330A 0.6						
						-- -- 1.0 -- .00 .99 -- .02 --												
09/03/75 0450	5-5n 20t	10.2 105	62.6F 17.0C	8.1	338	-- -- -- -- -- -- --	--	--	--	--	--	0AF						

TABLE D-3

MINOR ELEMENT ANALYSIS OF SURFACE WATER

Lab and Sampler Agency Code

5050 - Department of Water Resources

Abbreviations

<u>TIME</u>	- Pacific Standard Time on a 24-hour clock
<u>DISCH</u>	- Instantaneous discharge in cubic feet per second
<u>EC</u>	- Electrical conductance in micromhos at 25° Celsius
<u>TEMP</u>	- Water temperature at time of sampling in degrees Fahrenheit (F) and Celsius (C)
<u>PH</u>	- Measure of acidity (<7) or alkalinity (>7) of water
<u>CHROM (ALL)</u>	- All chromium
<u>CHROM (HEX)</u>	- Hexavalent chromium
<u>D</u>	- Dissolved
<u>T</u>	- Total

TABLE D-3 cont
MINOR ELEMENT ANALYSIS OF SURFACE WATER

DATE	SAHM	TEMP	LHN	THP	MH	ARSENIC	MARJUO	CHROM (ALL)	COPPER	LEAD	MERCURY	SILVER
								CHROM (MEX)	IRON	MANGANESE	SELENIUM	ZINC
04/15/75	5 20	114°	5 20	F6	5279.00	VAN DUZEN RIVER NEAR RHIOUEVILLE	--	--	0.00 T	0.00 T	--	--
				8.0 C	7.4	--	0.00 T	--	2.1 T	0.02 T	--	0.01 T

TABLE D-4
NUTRIENT ANALYSIS OF SURFACE WATER

Lab and Sampler Agency Code

5050 - Department of Water Resources

Abbreviations

<u>TIME</u>	- Pacific Standard Time on a 24-hour clock
<u>G.H.</u>	- Instantaneous gage height in feet above an established datum
<u>Q</u>	- Instantaneous discharge measured in cubic feet per second (cfs). "E" indicates the value has been estimated.
<u>TEMP</u>	- Water temperature in degrees Fahrenheit (F) or Celsius (C)
<u>TURB</u>	- Jackson Turbidity Units measured with a Hellege Turbidimeter (E) or a Hach Nephelometer (A)
<u>PH</u>	- Measure of acidity or alkalinity of water
<u>EC</u>	- Electrical conductance in micromhos at 25° C.
<u>HCO₃</u>	- Bicarbonate
<u>C0₃</u>	- Carbonate

Nitrogen Series as N

N0 ₂	- Unfiltered nitrite
NH ₃	- Unfiltered ammonia
N0 ₃	- Unfiltered nitrate
ORG N	- Organic nitrogen
DIS ORG N	- Dissolved organic nitrogen
NH ₃ + ORG N	- Ammonia plus organic nitrogen

Phosphorus Series as P

DIS A.H.PO ₄	- Dissolved acid hydrolyzable phosphate
D O-PO ₄	- Dissolved orthophosphate
T O-PO ₄	- Total orthophosphate
D TOT P	- Dissolved total phosphorus
TOT P	- Total phosphorus

TABLE D-4 cont
NUTRIENT ANALYSIS OF SURFACE WATER

DATE	SAMPLE	TIME	LAKE	TEMP F-°HM	P-EC	TURB CACO3 P	O NO2 + NO3 U NO2	O NH3	O NO3	NUTRIENT CONSTITUENTS IN MILLIGRAMS PER LITER				O TOT P
										O DRG N	O (NH3 + OHG N)	O DS	O PO4	
F6 1364.50 EEL RIVER ABOVE OUTLET CREEK NEAR DOS RIOS														
10/03/74 5:30	0930			17.0 C	8.1	236	DAF	--	--	--	--	--	0.01	--
								--	0.03	--	--	--	--	--
02/20/75 5:30	0945			7.0 C	7.7	94	IAAF	--	--	--	--	--	0.00	--
								--	0.10	--	--	--	--	--
04/14/75 5:30	1025	5:30		15.0 C	7.6	5A		--	--	--	--	--	0.01	--
								--	0.01	--	0.0	--	--	0.01
09/04/75 5:30	0945	5:30		20.0 C	6.2	227	DA	--	--	--	--	--	0.01	--
								--	0.10	--	--	--	--	--
F6 1364.00 OUTLET CREEK NEAR LONGVALE														
04/14/75 5:30	1045	5:30		11.0C	7.6	24		--	--	--	--	--	0.01	--
								--	0.02	--	0.1	--	--	0.01
F6 3004.01 EEL RIVER MIDDLE FORK AT DOS RIOS														
01/08/75 5:30	1445	5:30		7.0 C	8.1	92	370A	--	--	--	--	--	0.01	--
								--	0.12	--	--	--	--	--
02/20/75 5:30	1445	5:30		6.0 C	7.9	104	286AF	--	--	--	--	--	0.02	--
								--	0.09	--	--	--	--	--
04/14/75 5:30	0945	5:30		7.0C	7.5	145	40A	--	--	--	--	--	0.01	0.03
								--	0.02	--	0.1	--	--	--
05/14/75 5:30	0915	5:30		11.0 C	7.8	92	150A	--	--	--	--	--	0.00	--
								--	0.05	--	--	--	--	--
06/11/75 5:30	0825	5:30		17.0 C	7.6	126	8A	--	--	--	--	--	0.01	--
								--	0.05	--	--	--	--	--
07/09/75 5:30	0855	5:30		21.0C	6.1	215	1AF	--	--	--	--	--	0.01	--
								--	0.03	--	--	--	--	--
F6 3051.00 MILL CREEK NEAR COVelo														
02/20/75 5:30	1120	5:30		8.0 C	6.1	121	74AF	--	--	--	--	--	0.06	--
								--	0.15	--	--	--	--	--
04/14/75 5:30	0905	5:30		8.0 C	7.8	209	2A	--	--	--	--	--	0.02	0.03
								--	0.06	--	0.1	--	--	--
05/14/75 5:30	0835	5:30		16.0C	7.0	262	0A	--	--	--	--	--	0.02	--
								--	0.07	--	--	--	--	--
F6 3201.00 BLACK BUTTE RIVER NEAR COVelo														
12/06/74 5:30	1155	5:30		7.0 C	7.6	142	16AF	--	--	--	--	--	0.02	--
								--	0.15	--	--	--	--	--
04/14/75 5:30	0745	5:30		4.0 C	7.0	141	1RA	--	--	--	--	--	0.00	--
								--	0.04	--	0.0	--	--	0.02
07/08/75 5:30	1700	5:30		24.0 C	6.1	210	1AF	--	--	--	--	--	0.00	--
								--	0.02	--	--	--	--	--
08/12/75 5:30	1600	5:30		26.0 C	6.2	251	1AF	--	--	--	--	--	0.00	--
								--	0.03	--	--	--	--	--
09/04/75 5:30	0700	5:30		17.0 C	6.0	276	1A	--	--	--	--	--	0.00	--
								--	0.10	--	0.1	--	--	--
F6 4101.00 EEL RIVER SOUTH FORK NEAR MIWANNA														
04/15/75 5:30	1430	5:30		10.5C	6.3	142	6A	--	--	--	--	--	0.02	--
								--	0.02	--	0.1	--	--	0.03
F6 5273.00 VAN DUZEN RIVER NEAR WHITFIELDVILLE														
08/15/75 5:30	1140	5:30		8.0 C	7.4	110	17A	--	--	--	--	--	0.01	--
								--	0.01	--	0.1	--	--	0.00

TABLE D-5

PESTICIDES IN SURFACE WATER

All samples were collected and analyzed for pesticides by the Department of Water Resources (5050).

All samples were analyzed for two groups of pesticides, chlorinated organic compounds and organic phosphorus compounds. All pesticides detected are included in Table D-5. Other pesticides in these groups were absent or below detectable levels.

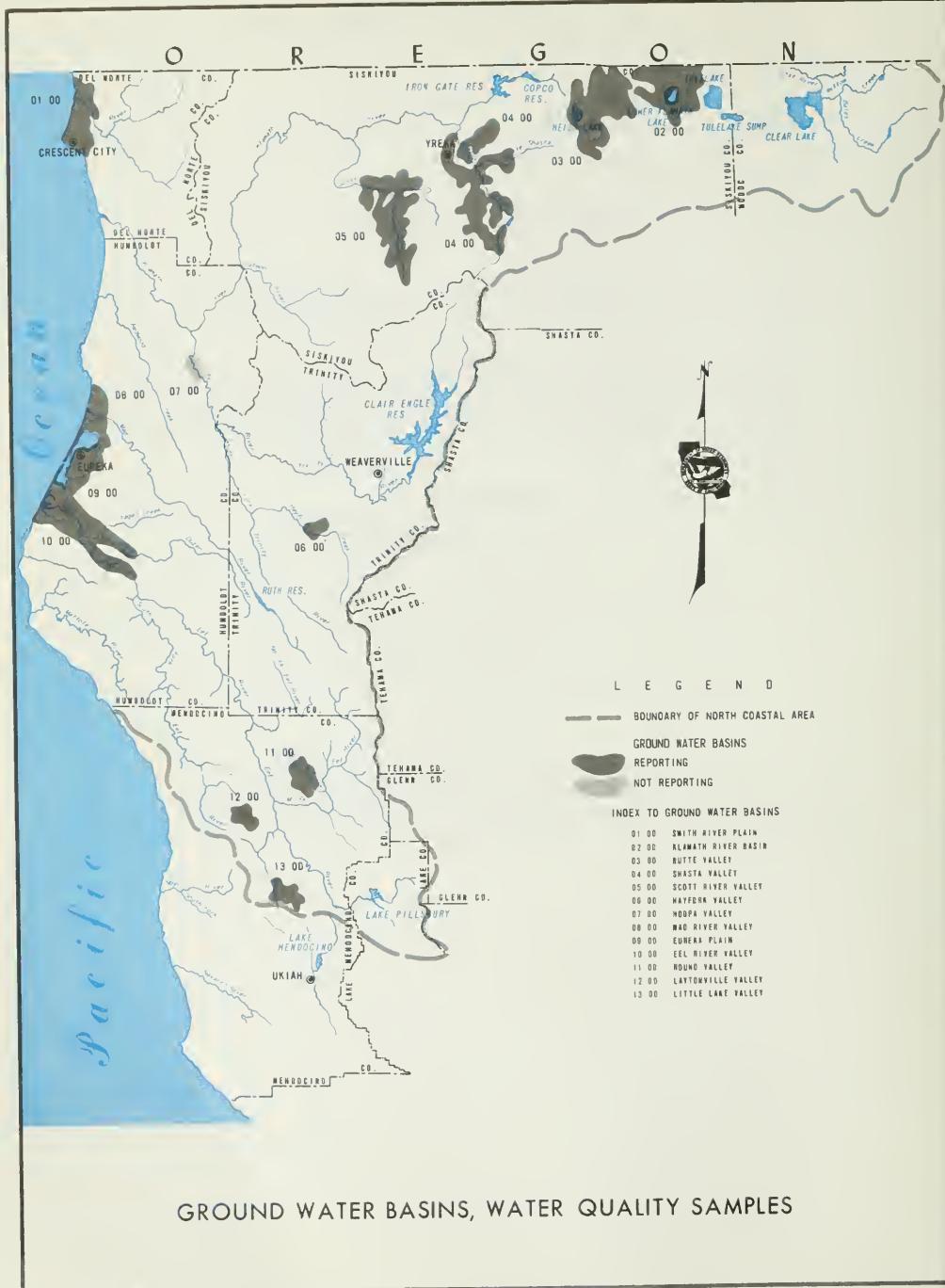
Pesticides

BHC	- Benzene hexachloride
DDT	- Dichloro diphenyl trichloroethane
ppDDD	- Para para isomer of dichloro diphenyl dichloroethane
ppDDT	- Para para isomer of dichloro diphenyl trichloroethane

When two pesticides are reported together with a slash mark separating them (ppDDE/Dieldrin, Simazine/Atrazine, etc.), the reported concentration is an undifferentiated total of the two. Either of the two pesticides could make up the entire total.

TABLE D-5

DATE TIME	SAMPLE LAB	TEMP EC	DD PH	PESTICIDES IN SURFACE WATER COMPOUNDS REPORTED IN MILLIGRAMS/LITER			OTHER
				CHLORINATED HYDROCARBON	ORGANIC PHOSPHORUS		
<hr/>							
04/15/75 5:00 0700	F1 1300.00 SJDO	6.0C 11.9 8.2		NONE DETECTED	NONE DETECTED		
05/05/75 5:00 1220	F2 1650.00 SCOTT RIVER NEAR YREKA	17.0C 10.2 8.2		NONE DETECTED	NONE DETECTED		
05/05/75 5:00 1635	F2 5250.00 SCOTT RIVER NEAR FORT JONES	11.0C 10.0 7.6		NONE DETECTED	NONE DETECTED		
04/14/75 5:00 1434	F3 1100.00 KLAMATH RIVER NEAR KLAMATH	10.0C 10.8 7.6		NONE DETECTED	NONE DETECTED		
04/14/75 5:00 1005	F3 1599.01 KLAMATH RIVER BELOW IRON GATE DAM	9.0C 10.9 7.6		NONE DETECTED	NONE DETECTED		
05/05/75 5:00 1136	F4 1600.00 TRINITY RIVER AT HOOPA	10.0C 10.4 7.6		NONE DETECTED	NONE DETECTED		
04/14/75 5:00 1245	F4 1376.00 TRINITY RIVER NEAR HURNT RANCH	9.0C 10.4 7.6		NONE DETECTED	NONE DETECTED		
05/12/75 5:00 0916	F5 1100.00 EEL RIVER AT SCOTIA	11.0C 10.4 7.6		NONE DETECTED	NONE DETECTED		
04/15/75 5:00 1140	F6 5279.00 VAN DUZEN RIVER NEAR BRIDGEVILLE	10.5C 10.2 7.6		NONE DETECTED	NONE DETECTED		



APPENDIX E

GROUND WATER QUALITY

This appendix presents ground water quality data collected during the period from October 1, 1974, through September 30, 1975. The data were collected from a number of major ground water sources in the north coastal area in cooperation with local agencies. During the 1975 water year, 92 wells were sampled in 10 ground water basins.

At the time of field sampling, pH, specific conductance, and temperature measurements are made. The results are compared with measurements made in previous years. If a substantial change is noted, the samples are submitted to the laboratory for further analyses.

Laboratory analyses of ground waters are performed in accordance with "Standard Methods for the Examination of Water and Waste Water", 13th Edition, 1971.

The Region and Basin and State Well Numbering Systems are described in Appendix C, "Ground Water Measurements".

TABLE E-1
MINERAL ANALYSES OF GROUND WATER

An explanation of column headings follows:

The LAB and SAMPLER agency code is as follows:

5050	- California Department of Water Resources
<u>TIME</u>	- Pacific Standard Time on a 24-hour clock
<u>TEMP</u>	- Water temperature in degrees Fahrenheit or degrees Celsius. The computer prints out both.
<u>PH LAB & FIELD</u>	- Measure of acidity or alkalinity of water
<u>EC LAB</u>	- The electrical conductance in micromhos at 25° Celsius
<u>EC FIELD</u>	- The electrical conductance in micromhos at time of field sampling
<u>TDS</u>	- Gravimetric determination of total dissolved solids at 180° Celsius
<u>SUM</u>	- Total dissolved solids determined by addition of analyzed constituents
<u>TH</u>	- Total hardness
<u>NCH</u>	- Noncarbonate hardness
<u>SAR</u>	- Sodium adsorption ratio
<u>PERCENT</u> <u>REACTANCE</u> <u>VALUE</u>	- Determined by dividing the sum of the cations or anions in milliequivalents per liter into each constituent in milliequivalents per liter arriving at a percentage. For a partial analysis, an approximate value is determined by multiplying the electrical conductance by 0.01 and using that as the cation or anion sum.

The MINERAL CONSTITUENTS are as follows:

B	- Boron	K	- Potassium
CA	- Calcium	MG	- Magnesium
CL	- Chloride	NA	- Sodium
C _O ₃	- Carbonate	NO ₃	- Nitrate
F	- Fluoride	SiO ₂	- Silica
HCO ₃	- Bicarbonate	SO ₄	- Sulfate

DATE TIME	SAMPLE LAB	TEMP PM	FIELD LABORATORY EC	MINERAL CONSTITUENTS IN MILLIEQUIVALENTS PER LITER										MILLIGRAMS PER LITER							
				CA	MG	NA	K	CO3	MC03	SO4	CL	NO3	B	F	T05	TH	NCH	SAR			
1 1-01 NORTH COASTAL REGION SMITH RIVER PLAIN																					
09/10/75 1345	16N/01-E-02001 SuSN	H 56.0F 13.3C	6.8 185	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
09/10/75 1615	16N/01-E-20H01 SuSN	H 58.0F 14.4C	6.3 180	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
09/10/75 1650	16N/02-E-13E01 SuSN	H 59.0F 15.5C	6.7 445	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
09/10/75 1430	17N/01-E-03E01 SuSN 5.5n	H 57.0F 13.9C	7.0 8.3 295	10 .50 16	29 2.38 75	3.0 .17 5	4.3 .11 3	0 .00	171 2.60 88	7.0 .15 5	4.6 .13 4	5.7 .09 3	.00	--	167	149	144	0.1			
09/10/75 1420	17N/01-E-04J01 SuSN	H 58.0F 14.4C	7.0 305	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
09/10/75 1405	17N/01-E-14C02 5.5n	H 61.0F 16.1C	6.7 180	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
09/10/75 1530	18N/01-E-05K01 5.5n	H 59.0F 14.4C	6.1 7.6 170	11 .55 35	4.7 .39 25	14 .61 39	4 .01 1	0 .00	35 .57 35	5.4 .11 7	19 .54 33	25.0 .40 25	.00	--	140	97	46	0.9			
09/10/75 1510	18N/01-E-26H01 5.5n	H 67.0F 14.4C	6.6 100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
09/10/75 1445	18N/01-E-34H02 5.5n	H 59.0F 15.0C	6.8 295	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
1-02 KLAMATH RIVER BASIN																					
06/11/75 1215	46N/02E-15F01 SuSN SuSN	H 56.0F 13.3C	7.5 183	--	--	--	--	--	--	--	--	0.9 .19 .06	3.5	--	--	--	--	46			
06/11/75 1240	47N/02E-20C01 SuSN 5.5n	H 48.0F 8.2 H.9C	6.8 3.20 11.90	3500 11.18	240 7.66 25	136 1.26 1	176 1.00 0	10 0.00	159 2.61 9	436 9.08 30	520 14.66 48	264 4.26 14	.20	--	2770	1160	1028	2.3			
1-03 RUTTE VALLEY																					
06/11/75 1135	45N/01E-09C02 5.5n	H 57.0F 13.9C	7.7 208	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
06/11/75 1310	47N/01E-06A02 5.5n	H 55.0F 12.8C	7.9 1080	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
06/11/75 1320	47N/01E-06J01 5.5n	H 55.0F 12.6C	7.8 1330	21 1.05	28 2.36	242 10.53	22 .56	36 1.20	552 9.05	126 2.62	62 1.75	4.0 .06	1.10	--	A47	169	0	0.1			
06/12/75 1005	47N/01E-07C02 5.5n	H 64.0F 17.8C	7.9 732	--	--	--	--	--	--	--	--	50 1.41	2.7 .04	--	--	--	--	157			
06/12/75 1010	47N/01E-07C03 5.5n	H 76.0F 24.4C	8.4 460	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
06/12/75 0925	47N/01E-08D01 5.5n	H 52.0F 10.7C	7.2 760	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
06/12/75 1145	47N/01E-32A01 5.5n	H 7.0F 21.1C	8.1 222	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
06/11/75 1415	48N/01E-30F01 5.5n	H 55.0F 12.8C	7.9 400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			

TABLE E-1 cont
MINERAL ANALYSES OF GROUND WATER

DATE TIME	SAMPLER LAB	TEMP PH EC	FIELD LABORATORY CA MG NA K CO ₃ HCO ₃	MINERAL CONSTITUENTS IN MILLIEQUIVALENTS PER LITER	MILLIGRAMS PER LITER		PERCENT REACTANCE VALUE 504	CL NO ₃	B SI ₀₂	F TOS SUM NCH	TH SAR										
					PERCENT REACTANCE VALUE 504	CL NO ₃															
1 1-n3																					
NORTH COASTAL REGION HUTTE VALLEY																					
06/11/75 1030	5.5n	45N/11=33D01	M 54.0F 12.2C	7.0 125	--	--	--	--	--	--	--	--									
06/11/75 1000	5.5n	45N/12=01P01	M 54.0F 11.0C	6.7 195	--	--	--	--	--	--	--	--									
06/11/75 0950	5.5n	45N/12=01402	M 49.0F 9.4C	6.6 105	--	--	--	--	--	--	--	--									
06/12/75 0840	5.5n	46N/11=04P01	M 56.0F 11.3C	7.4 8.5 575	--	--	--	6.0 .20 5.47	3.34 --	8.3 .23 .07	4.5	--									
06/12/75 0750	5.5n	46N/11=17H01	M 54.0F 12.2C	H.2 400	--	--	--	--	--	--	--	--									
06/12/75 0720	5.5n	46N/11=17G02	M 54.0F 11.3C	H.1 440	--	--	--	--	--	--	--	--									
06/12/75 0710	5.5n 5.5n	46N/11=17L01	M 54.0F 12.2C	420 412	--	--	--	--	--	5.4 .15	19.0 .31	--									
06/11/75 1120	5.5n	46N/11=29F01	M 52.0F 11.1C	7.0 360	--	--	--	--	--	--	--	--									
06/12/75 0655	5.5n	46N/12=13P01	M 54.0F 11.2C	7.2 455	--	--	--	--	--	--	--	--									
06/12/75 1420	5.5n	46N/12=25R02	M 54.0F 12.2C	7.1 340	--	--	--	--	--	--	--	--									
06/12/75 1450	5.5n 5.5n	46N/12=26P01	M 54.0F 12.2C	7.2 300 272	--	--	--	--	--	.5 .01	8.9 .14	--									
06/12/75 1440	5.5n	46N/12=28Q02	M 52.0F 11.1C	7.1 340	--	--	--	--	--	--	--	--									
06/12/75 1500	5.5n	46N/12=34B01	M 54.0F 11.1C	8.2 168	--	--	--	--	--	--	--	--									
06/12/75 1520	5.5n 5.5n	46N/12=36K01	M 53.0F 11.7C	6.8 386	--	--	--	--	--	4.0 .11	39.0 .63	--									
06/11/75 1430	5.5n 5.5n	47N/11=23H02	M 64.0F 2.5C	7.7 265 237	--	--	--	--	--	7.4 .22	12.0 .19	--									
06/11/75 1700	5.5n 5.5n	47N/11=21H03	M 56.0F 13.3C	7.1 120 104	--	--	--	--	--	.0	1.6 .00	--									
06/11/75 1500	5.5n	48N/11=28J01	M 52.0F 11.7C	7.4 446	--	--	--	--	--	--	--	--									
06/11/75 1450	5.5n 5.5n	48N/11=28J03	M 54.0F 11.0C	7.7 61.0 54.5	--	--	--	--	--	5.4 .15	21.0 .34	--									
06/11/75 1530	5.5n 5.5n	48N/11=31M01	M 57.0F 13.4C	6.8 820 732 3.74 3.37 4.4H 1.2 2	55 41 19 4.3 0 115 28 54 140 .58 1.52 2.90 8 22 42	--	--	--	--	--	.00	--									
06/11/75 1550	5.5n	48N/11=34G01	M 54.0F 22.6C	H.4 500	--	--	--	--	--	--	--	--									

TABLE E-1 cont
MINERAL ANALYSES OF GROUND WATER

DATE TIME	SAMPLE L-B	TEMP FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN PPM	MILLIGRAMS PER LITER										MILLIGRAMS PER LITER								
				CA	MG	NA	K	CO ₃	HCO ₃	SO ₄	CL	NO ₃	SiO ₂	SiH	TH	VCN	SAR					
1 1-64																						
NORTH COASTAL REGION SHASTA VALLEY																						
06/18/75 1300	5.50 5.50	+2N/15e-20J01 5.50	H 54.0F 12.2C	6.4	340	--	--	--	--	--	--	--	3.5 +10	1.1 +02	--	--	--	129				
06/18/75 1330	5.50	+2H/16e-17J01 1330	H 57.0F 13.9C	7.3	570	--	--	--	--	--	--	--	--	--	--	--	--	--				
06/18/75 1545	5.50	+3N/14e-07H01 1525	H 70.0F 24.4C	6.8	2500	--	--	--	--	--	--	--	--	--	--	--	--	--				
06/18/75 1525	5.50	+3N/15e-02C01 1525	H 52.0F 11.1C	6.6	280	--	--	--	--	--	--	--	--	--	--	--	--	--				
06/18/75 1350	5.50 5.50	+3N/ 6e-21K01 1350	H 54.0F 14.4C	7.3 6.1	505 304	24 14.5	1.9 +3	7.9 +74	4.7 +02	0 +00	143 3.16	8.1 +17	2.0 +06	6.6 +11	.00 2	--	187 169	150 0	0.3			
06/18/75 1500	5.50 5.50	+4H/ 5e-32C03 1500	H 60.0F 16.9C	7.2	1090 482	--	--	--	--	--	--	--	5.4 1.52	6.0 +10	--	--	--	393				
06/18/75 1440	5.50 5.50	+4H/ 6e-15C01 1440	H 63.0F 17.2C	7.3	660 530	--	--	--	--	--	--	--	26 .73	20.0 +32	--	--	--	233				
06/18/75 1420	5.50 5.50	+4N/ 6e-22K01 1420	H 60.0F 15.5C	6.8 6.2	670 460	31 1.55	22 1.91	33 1.44	1.6 0.4	0 +00	219 3.59	14 +29	21 +59	30.0 +6.8	.30 6	--	207 261	168 0	1.1			
06/20/75 1000	5.50	+5H/ 5e-0AE01 1000	H 64.0F 2.5C	7.3	1025	--	--	--	--	--	--	--	--	--	--	--	--	--				
06/20/75 0815	5.50 5.50	+5N/ 6e-19E01 0815	H 54.0F 17.8C	7.7	357 330	--	--	--	--	--	--	--	3.0 .08	1.8 +03	--	--	--	108				
06/20/75 0945	5.50	+5H/ 6e-22H01 0945	H 67.0F 14.4C	7.3	510	--	--	--	--	--	--	--	--	--	--	--	--	--				
06/20/75 0925	5.50 5.50	+5N/ 6e-27D02 0925	H 65.0F 15.0C	7.2	605 580	--	--	--	--	--	--	--	20 .56	29.0 +.47	--	--	--	220				
06/19/75 0400	5.50 5.50	+5N/ 6e-30E01 0400	H 65.0F 14.3C	7.5	480 450	--	--	--	--	--	--	--	10 .28	29.0 +.47	--	--	--	192				
1-65 SCOTT RIVER VALLEY																						
06/19/75 1430	5.50	+4H/ 8e-02H01 1430	H 54.0F 12.2C	7.2	590	--	--	--	--	--	--	--	--	--	--	--	--	--				
06/19/75 1050	5.50 5.50	+4H/ 8e-27K01 1050	H 56.0F 11.3C	7.0	1040 950	--	--	--	--	--	--	--	3.0 .00	3.0 +.05	--	--	--	30				
06/19/75 1045	5.50	+4H/ 4e-29A02 1045	H 56.0F 15.0C	7.4	150	--	--	--	--	--	--	--	--	--	--	--	--	--				
06/19/75 1215	5.50	+4H/ 9e-0AF01 1215	H 56.0F 12.8C	7.4	120	--	--	--	--	--	--	--	--	--	--	--	--	--				
06/19/75 1230	5.50	+3N/ 9e-0AH01 1230	H 55.0F 12.8C	6.1	124	--	--	--	--	--	--	--	--	--	--	--	--	--				
06/19/75 1120	5.50	+3H/ 9e-29G02 1120	H 57.0F 21.1C	6.7	80	--	--	--	--	--	--	--	--	--	--	--	--	--				
06/19/75 1150	5.50	+3N/ 10e-17E01 1150	H 59.0F 15.0C	6.9	70	--	--	--	--	--	--	--	--	--	--	--	--	--				

TABLE E-1 cont
MINERAL ANALYSES OF GROUND WATER

DATE TIME	SAMPLE NO.	FIELD NO.	LABORATORY NO.	MINERAL CONSTITUENTS IN MICRO-EQUIVALENTS PER LITER							MILLIGRAMS PER LITER									
				CA	Mg	Na	K	CO ₃	HCO ₃	SO ₄	Cl	NO ₃	R	F	TDS	SiO ₂				
1 1-11																				
NORTH COASTAL REGION ROUND VALLEY																				
07/02/75 1145	5-5n 1145	ZYN/12a-06L02	H 6.0F 14.5C	7.2	410	--	--	--	--	--	--	--	--	--	--	--	--			
07/02/75 1145	5-5n 1145	ZYN/12a-19F01	H 54.0F 15.0C	6.8	445	--	--	--	--	--	--	--	--	--	--	--	--			
07/02/75 1055	5-5n 5-5n	ZYN/13a-01J03	H 6.0F 15.5C	7.2	246	23	9.6	9.5	.5	0	118	12	4.0	.8	.00	--	135			
07/02/75 1115	5-5n 1115	ZYN/13a-13A01	H 7.0F 21.1C	6.9	250	--	--	--	--	--	--	--	--	--	--	--	97			
07/02/75 1037	5-5n 1037	ZDH/12a-31L01	H 54.0F 15.0C	7.4	265	--	--	--	--	--	--	--	--	--	--	--	--			
07/02/75 0932	5-5n 0932	ZDN/12a-33L03	H 6.0F 2.0C	7.1	605	--	--	--	--	--	--	--	--	--	--	--	--			
07/02/75 1000	5-5n 1000	ZDN/13a-25B01	H 6.0F 14.5C	7.5	255	--	--	--	--	--	--	--	--	--	--	--	--			
07/02/75 1010	5-5n 5-5n	ZDH/13a-36P03	H 6.0F 15.5C	6.9	275	23	16	6.4	.5	0	143	5.4	3.0	8.5	.00	--	153			
1-12																				
LAYTONVILLE VALLEY																				
07/02/75 1500	5-5n 5-5n	ZIN/15a-01L02	H 65.0F 16.3C	7.2	455	--	--	--	--	--	--	--	10 .29	.0 .00	--	--	194			
07/02/75 1514	5-5n 1514	ZIN/15a-12H01	H 67.0F 14.4C	5.9	80	--	--	--	--	--	--	--	--	--	--	--	--			
1-13																				
LITTLE LAKE VALLEY																				
07/03/75 0900	5-5n 0900	IHN/13a-(BLR)	H 57.0F 15.0C	6.4	230	--	--	--	--	--	--	--	--	--	--	--	--			
07/03/75 0945	5-5n 5-5n	IHN/13a-20H03	H 56.0F 14.4C	6.6	275	--	--	--	--	--	--	--	4.4 .12	2.6 .04	--	--	112			

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